STIC Search Report
EIC 1700

STIC Database Tracking Number: 186306

TO:	From:
Amanda Walke Location: REM 9D64 Art Unit : 1752 April 27, 2006 Case Serial Number: 10/091373	Usha Shrestha Location: EIC 1700 REMSEN 4B28 Phone: 571/272-3519 usha.shrestha@uspto.gov

Search Notes

STIC Search Results Feedback Form

USPTO

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

ASAP please -
Amended application

Access DB# 86508

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Amanda Walker Examiner #: 75663 Date: 4/18/06
Art Unit: 1752 Phone Number 30[illegible]-1331 Serial Number: 10/091373
Mail Box and Bldg/Room Location: REM 9D64 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Bold Sweet Alkenes

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for the combination of monomers of formula I + formula II, (as claimed)
Thank you.

SCIENTIFIC REFERENCE BR
Sci & Tech Inf Ctr
APR 21 REC'D
Pat. & T.M. Office

****

STAFF USE ONLY **Type of Search** **Vendors and cost where applicable**

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

) Data Sheet

CONFIRMATION NO. 724(

SERIAL NUMBER	FILING DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/091,373	03/04/2002 RULE	430	1752	ARC920010125US1

'PLICANTS

Hiroshi Ito, San Jose, CA;

CONTINUING DATA **********

FOREIGN APPLICATIONS **********

REQUIRED, FOREIGN FILING LICENSE GRANTED
04/09/2002

'eign Priority claimed ☐ yes ☐ no USC 119 (a-d) conditions met ☐ yes ☐ no ☐ Met after Allowance 'ified and Acknowledged Examiner's Signature Initials	STATE OR COUNTRY CA	SHEETS DRAWING 1	TOTAL CLAIMS 31	INDEPENDEN CLAIMS 4

)DRESS
Elin Hartrum
EED & ASSOCIATES
ıite 210
)0 Menlo Avenue
enlo Park , CA
-025

TLE
)POLYMER FOR USE IN CHEMICAL AMPLIFICATION RESISTS

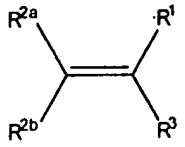
FILING FEE RECEIVED 1368	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

This listing of the claims replaces any and all prior versions and listings of claims in the application:

LISTING OF THE CLAIMS

1. (Currently amended) A copolymer prepared by copolymerization of:

a first monomer having the structure of formula (I)

(I) 

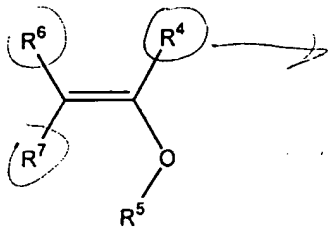
wherein

R^1 is H, F, CN, CH_3, or C_{1-6} fluoroalkyl,

R^{2a} and R^{2b} are independently H or F, and

R^3 is CN or COOR, wherein R is selected from the group consisting of H, C_{1-12} alkyl and C_{1-12} fluoroalkyl, or is selected so as to render R^3 acid-cleavable; and

a second monomer having the structure of formula (II)

(II) 

at least one is other than H

wherein

R^4 is H, C_{1-12} alkyl, C_{3-15} alicyclic, or fluorinated C_{3-15} alicyclic,

R^5 is C_{1-12} alkyl, C_{1-12} alkyl substituted with 1-12 fluorine atoms and 0-2 hydroxyl groups, or C_{3-15} alicyclic, or R^4 and R^5 together form a five-, six-, or seven-membered ring,

R^6 is H, C_{1-12} alkyl, or C_{1-12} fluoroalkyl, or R^4 and R^6 together form a five-, six-, or seven-membered ring, and

R^7 is H, C_{1-12} alkyl, or C_{1-12} fluoroalkyl, or R^7 and R^5 together represent $-X-(CR^8R^9)_n-$, in which case R^4 and R^6 are H, X is O or CH_2, n is 1 or 2, R^8 and R^9 are H, C_{1-12} alkyl, or C_{1-12}

fluoroalkyl, or together form an oxo moiety (=O), with the proviso that when R^8 and R^9 together form =O, n is 1,

wherein: (1) any of R^1, R^3, R^4, R^5, R^6, and R^7 may be further substituted with an inert, nonhydrogen substituent[[,]]; (2) when R^5 is C_{1-12} alkyl, at least one of R^4, R^6 and R^7 is other than hydrogen; and (3) ~~further wherein~~ at least one of the first monomer and the second monomer contains one or more fluorine atoms.

2. (Previously presented) The copolymer of Claim 29, wherein R^1 is CF_3.

3. (Original) The copolymer of Claim 2, wherein R^3 is COOR.

4. (Original) The copolymer of Claim 2, wherein R^3 is CN.

5. (Original) The copolymer of Claim 1, wherein R^1 and R^2 are F and R^3 is COOR.

6. (Original) The copolymer of Claim 1, wherein R^1 is CN and R^2 is H.

7. (Original) The copolymer of Claim 3, wherein R is C_{1-12} alkyl.

8. (Original) The copolymer of Claim 5, wherein R is C_{1-12} alkyl.

9. (Original) The copolymer of Claim 3, wherein R is selected to render R^3 acid-cleavable.

10. (Original) The copolymer of Claim 5, wherein R is selected to render R^3 acid-cleavable.

11. (Original) The copolymer of Claim 10, wherein R is a tertiary alkyl substituent.

12. (Original) The copolymer of Claim 11, wherein R is *t*-butyl.

Banks, Kendra

From: Kelly, Cynthia
Sent: Thursday, April 27, 2006 11:11 AM
To: Banks, Kendra
Cc: Walke, Amanda
Subject: FW: Status of Search Request

Ms Banks

Can you all do a rush search for the application cited below?
It is in after final status and we need the results quickly

thank You

CYnthia H. Kelly
SPE 1752
2-1526

-----Original Message-----
From: Walke, Amanda
Sent: Thursday, April 27, 2006 10:50 AM
To: Kelly, Cynthia
Subject: FW: Status of Search Request

I have an after final that I turned a search in for last week, but they told me this morning when I went to check on its statusthat I needed you to email them to do the search earlier. Would you mind shooting them an email. I need it by tomorrow a.m. Thanks

-----Original Message-----
From: Banks, Kendra
Sent: Thursday, April 27, 2006 10:37 AM
To: Walke, Amanda
Subject: Status of Search Request

At the time you submitted your request there was a 7 business day turnaround for searches to be completed. If you need it before Monday when it's scheduled to be completed you must have your SPE email me and I can have someone work on it sooner.

Sorry for the inconvenience,

Mrs. Kendra P. Banks
Technical Information Specialist
U.S. Patent & Trademark Office
Electronic Information Center 1700
Remsen 4B28
(571)272-2516
(571)273-0223 (Fax)

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 15:01:54 ON 27 APR 2006

=> d his)

     FILE 'HCAPLUS' ENTERED AT 13:42:03 ON 27 APR 2006
L1             1 S US20030186160/PN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 13:42:24 ON 27 APR 2006
L2            17 S E1-E17

     FILE 'LREGISTRY' ENTERED AT 13:42:56 ON 27 APR 2006
L3               STR
L4               STR

     FILE 'REGISTRY' ENTERED AT 13:49:32 ON 27 APR 2006
L5               SCR 2043
L6               STR L4
L7               STR L4
L8            50 S L3 AND L7 AND L5
L9               SCR 2077
L10           50 S L3 AND L7 AND L5 NOT L9
L11              STR L7
L12           50 S L3 AND L11 AND L5
L13           50 S L3 AND L11 AND L5 NOT L9
L14              SCR 1918 OR 1995 OR 2026 OR 2021 OR 2016
L15           50 S L3 AND L11 AND L5 NOT (L9 OR L14)
L16           50 S L3 AND L11 AND L5 NOT L14
L17           50 S L3 AND L7 AND L5 NOT (L9 OR L14)
L18        65283 S L3 AND L11 AND L5 NOT (L9 OR L14) FUL
L19            5 S L18 AND L2
                 SAV L18 TEMP WAL373/A

     FILE 'HCAPLUS' ENTERED AT 14:53:30 ON 27 APR 2006
L20       242746 S L18
L21        59331 S L20(L)PREP/RL
L22         4780 S L21(L)?RESIST?
L23         1429 S L22 AND PHOTOG?/SC
L24         1429 S L23 AND (RESIST? OR PHOTORESIST?)/IT
L25          108 S L24 AND AMPLIFIC?
L26           93 S L25 AND P/DT
L27           78 S L26 AND (1907-2002)/PRY,AY
L28           15 S L25 NOT L26
L29           11 S L28 NOT (2003-2006)/PY
L30           89 S L27 OR L29
L31           44 S L30 AND AMPLIFIC?(A)?RESIST?
L32            1 S L31 AND L1


=> d que l31
L3               STR

C==C~G1        O---C==O
1  2  3        4   @5  6

VAR G1=CN/5
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
```

```
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   6

STEREO ATTRIBUTES: NONE
L5              SCR 2043
L9              SCR 2077
L11             STR
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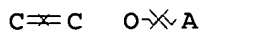

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1   2   3   4

NODE ATTRIBUTES:
NSPEC   IS RC     AT   1
NSPEC   IS RC     AT   2
NSPEC   IS RC     AT   3
NSPEC   IS RC     AT   4
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   4

STEREO ATTRIBUTES: NONE
L14             SCR 1918 OR 1995 OR 2026 OR 2021 OR 2016
L18       65283 SEA FILE=REGISTRY SSS FUL L3 AND L11 AND L5 NOT (L9 OR
                L14)
L20      242746 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18
L21       59331 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20(L)PREP/RL
L22        4780 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21(L)?RESIST?
L23        1429 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L22 AND PHOTOG?/SC
L24        1429 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L23 AND (RESIST? OR
                PHOTORESIST?)/IT
L25         108 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND AMPLIFIC?
L26          93 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25 AND P/DT
L27          78 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 AND (1907-2002)/PR
                Y,AY
L28          15 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25 NOT L26
L29          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 NOT (2003-2006)/PY

L30          89 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27 OR L29
L31          44 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND AMPLIFIC?(A)?R
                ESIST?


=> fil  hcap
FILE 'HCAPLUS' ENTERED AT 15:02:06 ON 27 APR 2006


=> d l31 1-44 ibib abs hitstr hitind

L31  ANSWER 1 OF 44  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        2004:219904  HCAPLUS
DOCUMENT NUMBER:         140:278420
TITLE:                   Chemical amplification type
                         photoresist composition
INVENTOR(S):             Kanna, Shinichi; Mizutani, Kazuyoshi; Sasaki,
```

Tomoya
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 44 pp.
CODEN: USXXCO
DOCUMENT TYPE: **Patent**
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004053161	A1	20040318	US 2003-642182 <--	2003 0818
US 6830871	B2	20041214		
JP 2004102264	A2	20040402	JP 2003-294268 <--	2003 0818
PRIORITY APPLN. INFO.:			JP 2002-238122 A <--	2002 0819

AB A chemical **amplification** type resist composition comprises: (a) a resin comprising repeating units having a side chain containing the specific partial structure and which increases the solubility in an alkaline developing solution by the action of an acid, (b) a compound capable of generating an acid upon irradiation with actinic rays or a radiation, (c) a low-mol. compound having a mol. weight of 3,000 or lower, wherein the value determined with the specific calcn. formula is from 0.1 to 0.5, and (d) a solvent.

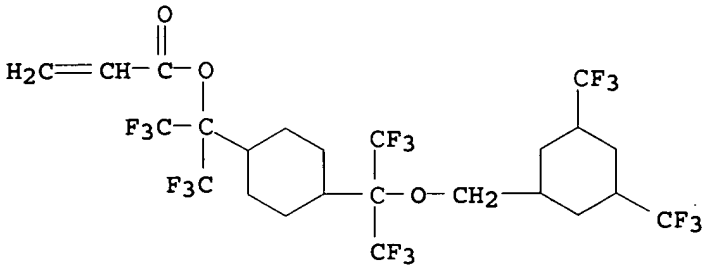
IT **672937-73-4P**
(chemical **amplification** type **resist** composition containing)

RN 672937-73-4 HCAPLUS

CN 2-Propenoic acid, 1-[4-[1-[[3,5-bis(trifluoromethyl)cyclohexyl]methoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-propenoate (9CI) (CA INDEX NAME)

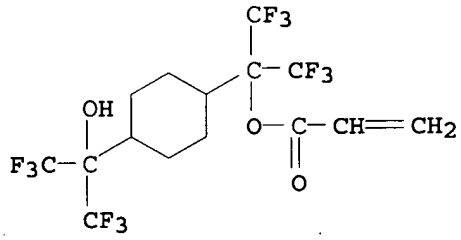
CM 1

CRN 672937-72-3
CMF C24 H24 F18 O3



CM 2

CRN 367522-45-0
CMF C15 H14 F12 O3

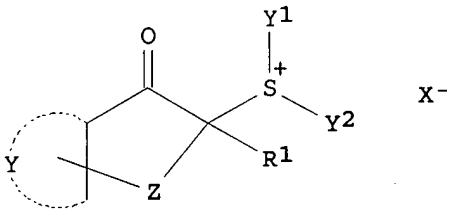


IC ICM G03F007-20
ICS G03F007-30; G03F007-038
INCL 430270100; 430311000; 430319000; 430905000; 430907000; 430919000; 430322000; 430325000
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38, 76
ST chem **amplification photoresist** compn
IT **Photoresists**
(chemical **amplification** type **resist** composition)
IT 19600-49-8P, Triphenylsulfonium acetate 144317-44-2P, Triphenylsulfonium nonafluorobutanesulfonate
(acid generator for chemical **amplification** type **resist** composition)
IT 672937-67-6P 672937-69-8P 672937-71-2P **672937-73-4P**
672937-74-5P 672937-76-7P 672937-77-8P 672937-79-0P
(chemical **amplification** type **resist** composition containing)
IT 1478-61-1, 2,2-Bis(4-hydroxyphenyl)hexafluoropropane 54043-62-8, 1,3,5-Trifluoroadamantane 68896-33-3 93923-80-9 121470-42-6 122085-43-2 365568-55-4 672937-80-3
(chemical **amplification** type **resist** composition containing)
IT 3744-08-9, Triphenylsulfonium iodide
(preparation of acid generator for chemical **amplification** type **resist** composition)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 2 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:834248 HCAPLUS
DOCUMENT NUMBER: 139:330330
TITLE: Chemically amplified photoresist compositions with high sensitivity and resolution
INVENTOR(S): Kodama, Kunihiko
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 63 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003302754	A2	20031024	JP 2002-110738 <--	20020412

PRIORITY APPLN. INFO.: JP 2002-110738 <-- 20020412
OTHER SOURCE(S): MARPAT 139:330330
GI

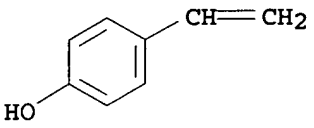


I

AB The resist compns., useful for excimer laser development, contain photoacid generators I (R1 = H, alkyl, aryl, cyano; Y1, Y2 = alkyl, aryl, aralkyl, heteroring; Y = condensed aromatic group, heteroring; Z = single bond, divalent linking group; X- = nonnucleophilic anion).
IT **159296-87-4P 250378-10-0P**, Butyrolactone methacrylate-2-ethyl-2-adamantyl methacrylate copolymer **607710-65-6P 607710-66-7P 607710-67-8P 607710-68-9P 607710-69-0P 607710-70-3P 607710-71-4P 607710-72-5P 607710-73-6P 610300-97-5P 610300-98-6P 610301-00-3P 610301-01-4P 610301-03-6P 615278-38-1P**
(sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)
RN 159296-87-4 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

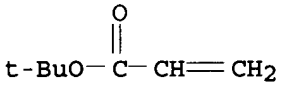
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

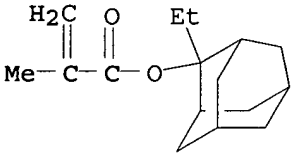
CRN 1663-39-4
CMF C7 H12 O2



RN 250378-10-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

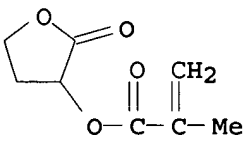
CM 1

CRN 209982-56-9
CMF C16 H24 O2



CM 2

CRN 195000-66-9
CMF C8 H10 O4

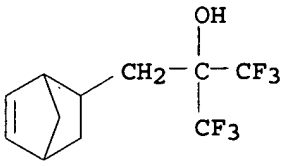


RN 607710-65-6 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-

methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with α,α-bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 196314-61-1
CMF C11 H12 F6 O



CM 2

CRN 188739-86-8
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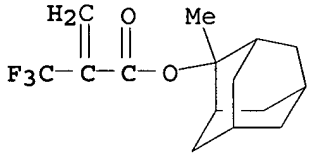
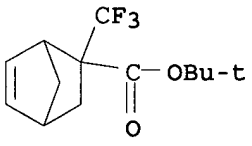


RN 607710-66-7 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

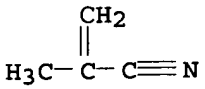
CM 1

CRN 365568-55-4
CMF C13 H17 F3 O2



CM 2

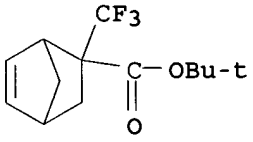
CRN 126-98-7
CMF C4 H5 N



RN 607710-67-8 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with methyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

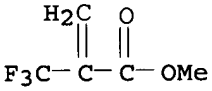
CM 1

CRN 365568-55-4
CMF C13 H17 F3 O2



CM 2

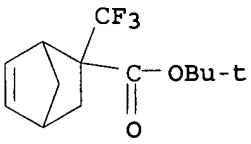
CRN 382-90-1
CMF C5 H5 F3 O2



RN 607710-68-9 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

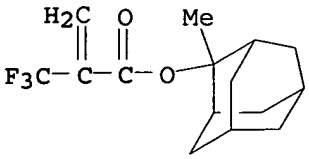
CM 1

CRN 365568-55-4
CMF C13 H17 F3 O2



CM 2

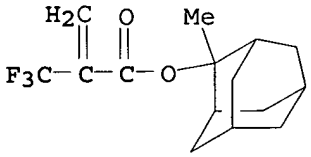
CRN 188739-86-8
CMF C15 H19 F3 O2



RN 607710-69-0 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tricyclo[3.3.1.13,7]dec-1-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

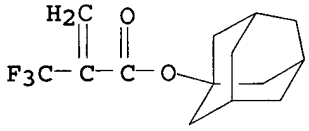
CM 1

CRN 188739-86-8
CMF C15 H19 F3 O2



CM 2

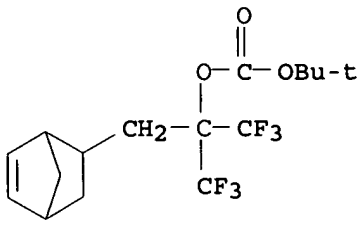
CRN 188739-82-4
CMF C14 H17 F3 O2



RN 607710-70-3 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.13,7]dec-1-yl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

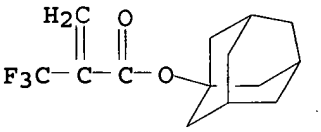
CM 1

CRN 196314-63-3
CMF C16 H20 F6 O3



CM 2

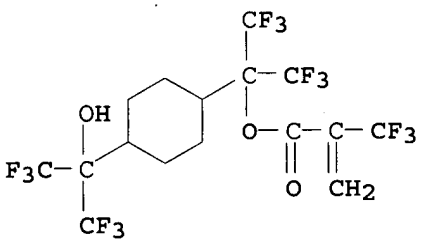
CRN 188739-82-4
CMF C14 H17 F3 O2



RN 607710-71-4 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

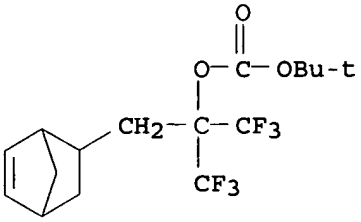
CM 1

CRN 479072-83-8
CMF C16 H13 F15 O3



CM 2

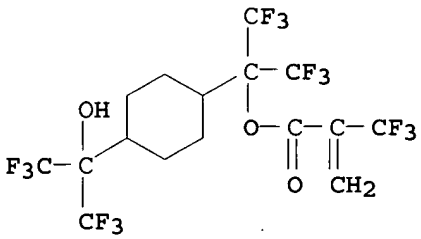
CRN 196314-63-3
CMF C16 H20 F6 O3



RN 607710-72-5 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

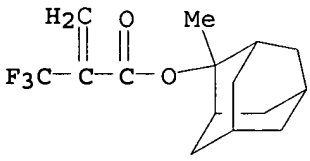
CM 1

CRN 479072-83-8
CMF C16 H13 F15 O3



CM 2

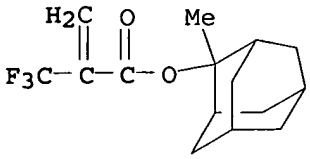
CRN 188739-86-8
CMF C15 H19 F3 O2



RN 607710-73-6 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 4-ethenyl-α,α-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

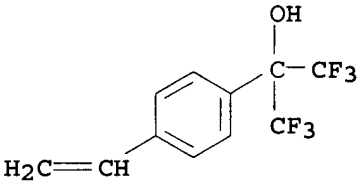
CM 1

CRN 188739-86-8
CMF C15 H19 F3 O2



CM 2

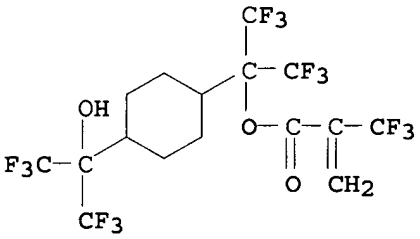
CRN 2386-82-5
CMF C11 H8 F6 O



RN 610300-97-5 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 5-[2-(ethoxymethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

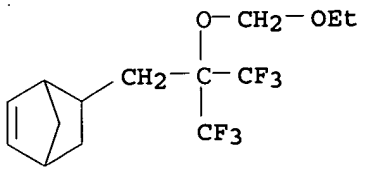
CM 1

CRN 479072-83-8
CMF C16 H13 F15 O3



CM 2

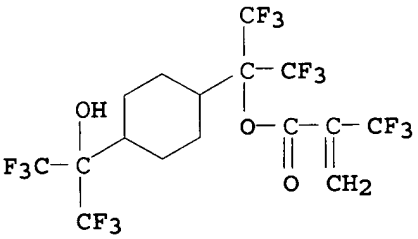
CRN 328114-61-0
CMF C14 H18 F6 O2



RN 610300-98-6 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

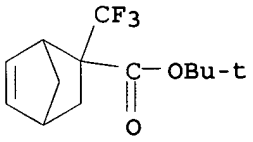
CM 1

CRN 479072-83-8
CMF C16 H13 F15 O3



CM 2

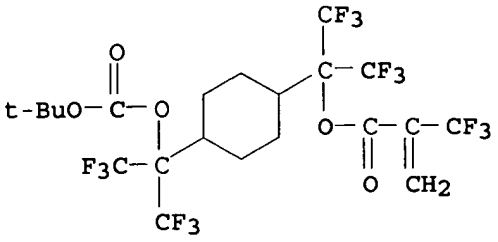
CRN 365568-55-4
CMF C13 H17 F3 O2



RN 610301-00-3 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[[(1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with tricyclo[3.3.1.13,7]dec-1-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

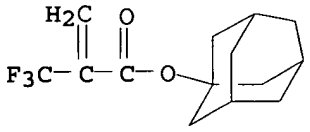
CM 1

CRN 610300-99-7
CMF C21 H21 F15 O5



CM 2

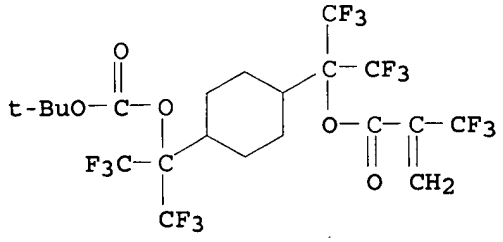
CRN 188739-82-4
CMF C14 H17 F3 O2



RN 610301-01-4 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[[(1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with α,α-bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

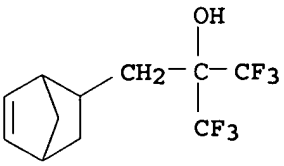
CM 1

CRN 610300-99-7
CMF C21 H21 F15 O5



CM 2

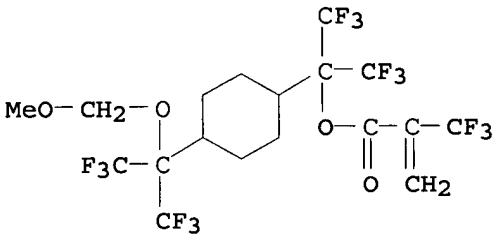
CRN 196314-61-1
CMF C11 H12 F6 O



RN 610301-03-6 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, methyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

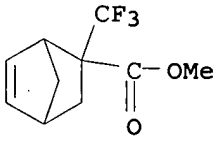
CM 1

CRN 610301-02-5
CMF C18 H17 F15 O4



CM 2

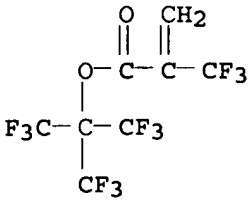
CRN 597581-42-5
CMF C10 H11 F3 O2



RN 615278-38-1 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethyl ester, polymer with α,α-bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

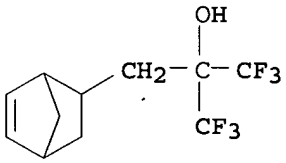
CM 1

CRN 615278-37-0
CMF C8 H2 F12 O2



CM 2

CRN 196314-61-1
CMF C11 H12 F6 O



IC ICM G03F007-004
ICS G03F007-038; G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST photoresist excimer laser sensitivity photoacid generator; chem **amplification photoresist** resoln sulfonium PAG
IT Sulfonium compounds
(arene, photoacid generators; sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)
IT Aromatic compounds
(sulfonium, photoacid generators; sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)
IT **Photoresists**
(sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)
IT 24979-70-2, p-Hydroxystyrene homopolymer
(VP 5000, VP 8000; sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)
IT 141-07-1 3089-11-0 4356-60-9 17464-88-9 161679-94-3
162846-57-3 162846-59-5 185502-14-1
(crosslinker; sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)
IT 615277-73-1 615277-76-4 615277-79-7 615277-81-1
615277-83-3 615277-86-6 615277-87-7 615277-90-2
615277-92-4 615277-95-7 615277-98-0 615278-00-7
615278-02-9 615278-05-2 615278-08-5 615278-11-0
615278-14-3 615278-17-6 615278-20-1 615278-23-4
615278-26-7 615278-29-0 615278-32-5
(photoacid generator; sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high

sensitivity and resolution)
IT 615277-70-8P
(photoacid generator; sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)
IT 615277-67-3P
(sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)
IT 109-92-2DP, Ethyl vinyl ether, ethers with hydroxystyrene homopolymer 24979-70-2DP, VP 15000, ethers with Et vinyl ether 129674-22-2P 143336-94-1P **159296-87-4P** 177034-73-0P 177034-75-2P 199432-82-1P 200808-68-0P 228101-60-8P **250378-10-0P**, Butyrolactone methacrylate-2-ethyl-2-adamantyl methacrylate copolymer 288620-13-3P 288620-15-5P 289623-64-9P 289706-85-0P 312620-54-5P 325143-38-2P 326591-96-2P 359635-35-1P 366808-82-4P 370102-83-3P 372968-15-5P 391232-36-3P 391613-77-7P 398140-38-0P 398140-43-7P 398140-45-9P 398140-59-5P 398140-68-6P 398140-69-7P 398140-77-7P 398140-80-2P 405509-19-5P 406702-00-9P 430437-18-6P 459418-30-5P 482609-97-2P 503003-65-4P 508210-04-6P 515876-73-0P 521303-15-1P 521303-16-2P 524699-47-6P 574735-94-7P **607710-65-6P** **607710-66-7P** **607710-67-8P** **607710-68-9P** **607710-69-0P** **607710-70-3P** **607710-71-4P** **607710-72-5P** **607710-73-6P** 607710-76-9P 607710-77-0P 610300-92-0P 610300-96-4P **610300-97-5P** **610300-98-6P** **610301-00-3P** **610301-01-4P** **610301-03-6P** 610301-04-7P 610301-05-8P 615278-33-6P 615278-35-8P **615278-38-1P**
(sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)
IT 75-77-4, Chlorotrimethylsilane, reactions 1600-44-8, Tetramethylenesulfoxide 54784-07-5
(sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)
IT 24979-69-9, Phenol, 3-ethenyl-, homopolymer 185405-14-5 321164-59-4 345212-27-3
(sulfonium-based photoacid generators for excimer laser-sensitive **photoresists** with high sensitivity and resolution)

L31 ANSWER 3 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:777219 HCAPLUS
DOCUMENT NUMBER: 139:299200
TITLE: Copolymer for use in chemical **amplification resists**
INVENTOR(S): Ito, Hiroshi
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 14 pp.
CODEN: USXXCO
DOCUMENT TYPE: **Patent**
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2003186160	A1	20031002	US 2002-91373 <--	2002 0304
JP 2003292542	A2	20031015	JP 2003-50104 <--	2003 0226
TW 593363	B	20040621	TW 2003-92104048 <--	2003 0226
PRIORITY APPLN. INFO.:			US 2002-91373 A <--	2002 0304

AB A copolymer is provided for use in a lithog. photoresist composition, particularly a chemical **amplification photoresist** . In a preferred embodiment, the copolymer is substantially transparent to deep UV radiation, i.e., radiation of a wavelength less than 250 nm, including 157 nm, 193 nm and 248 nm radiation, and has improved sensitivity and resolution In one embodiment, the copolymer is comprised of an α-cyano- or an α-trifluoro-methacrylate monomer unit and a vinyl ether monomer unit. A lithog. photoresist composition containing the fluorinated copolymer is also provided, as is a process for using the composition to generate resist images on a substrate, i.e., in the manufacture of integrated circuits or the like.

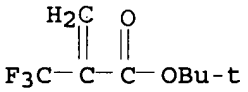
IT **478623-13-1P 478623-14-2P 478623-15-3P 478623-16-4P**
(copolymer for use in chemical **amplification resists**)

RN 478623-13-1 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2-(ethenyloxy)-2-methylpropane (9CI) (CA INDEX NAME)

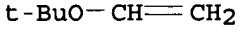
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

CRN 926-02-3
CMF C6 H12 O



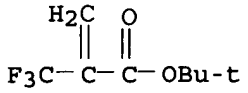
RN 478623-14-2 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester,

polymer with ethoxyethene (9CI) (CA INDEX NAME)

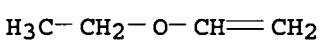
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

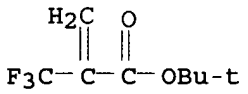
CRN 109-92-2
CMF C4 H8 O



RN 478623-15-3 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,3-dihydrofuran (9CI) (CA INDEX NAME)

CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



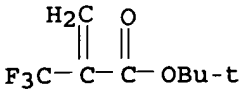
CM 2

CRN 1191-99-7
CMF C4 H6 O

RN 478623-16-4 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1,3-dioxol-2-one (9CI) (CA INDEX NAME)

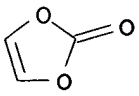
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

CRN 872-36-6
CMF C3 H2 O3



IT **608525-58-2P**
(copolymer for use in chemical **amplification resists**)
RN 608525-58-2 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, polymer with methoxycyclohexene (9CI) (CA INDEX NAME)

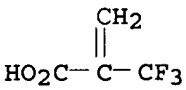
CM 1

CRN 39723-61-0
CMF C7 H12 O
CCI IDS

D1—O—Me

CM 2

CRN 381-98-6
CMF C4 H3 F3 O2



IC ICM G03F007-038
INCL 430270100; 430325000; 430907000
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38
ST copolymer chem **amplification photoresist**
IT **Photoresists**
(copolymer for use in chemical **amplification**

resists)

IT **478623-13-1P 478623-14-2P 478623-15-3P**
478623-16-4P 608525-59-3P
(copolymer for use in chemical **amplification resists**)

IT **608525-58-2P**
(copolymer for use in chemical **amplification resists**)

IT 335-08-0P, 1,1,1-Trifluoroacetone cyanohydrin 381-84-0P, 2-(Trifluoromethyl)Acrylonitrile 381-98-6P, 2-(Trifluoromethyl)Acrylic Acid 382-90-1P, Methyl α-(Trifluoromethyl)acrylate 4588-51-6P
(preparation of copolymer for use in chemical **amplification resists**)

IT 79-37-8, Oxalyl chloride 108-24-7, Acetic anhydride 143-33-9, Sodium cyanide 421-50-1, 1,1,1-Trifluoroacetone
(preparation of copolymer for use in chemical **amplification resists**)

IT 382-43-4P, 3-Hydroxy-2-(trifluoromethyl)propionic acid 105935-24-8P
(preparation of copolymer for use in chemical **amplification resists**)

L31 ANSWER 4 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:717781 HCAPLUS
DOCUMENT NUMBER: 139:237717
TITLE: Polymer blend and associated methods of preparation and use
INVENTOR(S): Breyta, Gregory; Ito, Hiroshi; Truong, Hoa D.
PATENT ASSIGNEE(S): International Business Machines Corporation, USA
SOURCE: U.S. Pat. Appl. Publ., 20 pp.
CODEN: USXXCO
DOCUMENT TYPE: **Patent**
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003171490	A1	20030911	US 2002-90646 <--	20020304
US 6794110	B2	20040921		
JP 2003292716	A2	20031015	JP 2003-49993 <--	20030226

PRIORITY APPLN. INFO.: US 2002-90646 A 20020304 <--

AB A polymer blend is provided for use in a lithog. photoresist composition, particularly a chemical **amplification photoresist.** In a preferred embodiment, the polymer blend is substantially transparent to deep UV radiation, i.e., radiation of a wavelength less than 250 nm, including wavelengths of 157 nm, 193 nm and 248 nm, and has improved sensitivity and resolution

Processes for preparing and using the polymer blend are also provided, as are lithog. photoresist compns. that contain the polymer blend.

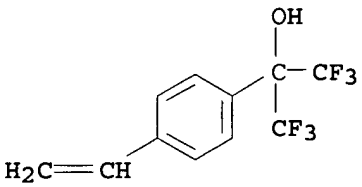
IT **370866-15-2P 478623-16-4P 594855-58-0P 594855-59-1P**
(polymer blend for **photoresist** composition)

RN 370866-15-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 4-ethenyl-α,α-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

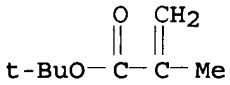
CM 1

CRN 2386-82-5
CMF C11 H8 F6 O



CM 2

CRN 585-07-9
CMF C8 H14 O2

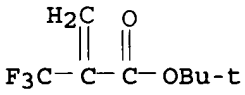


RN 478623-16-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1,3-dioxol-2-one (9CI) (CA INDEX NAME)

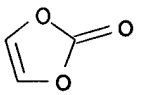
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

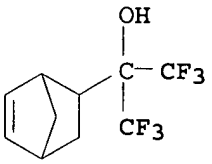
CRN 872-36-6
CMF C3 H2 O3



RN 594855-58-0 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with α,α-bis(trifluoromethyl)bicyclo[2.2.1]hep t-5-ene-2-methanol (9CI) (CA INDEX NAME)

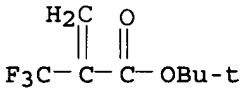
CM 1

CRN 369375-16-6
CMF C10 H10 F6 O



CM 2

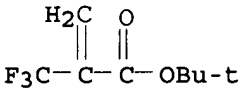
CRN 105935-24-8
CMF C8 H11 F3 O2



RN 594855-59-1 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with dihydrofuran (9CI) (CA INDEX NAME)

CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

CRN 36312-17-1
CMF C4 H6 O
CCI IDS

CM 3

CRN 109-99-9
CMF C4 H8 O

IC ICM G03F007-038
ICS C08L001-00
INCL 525050000; 430270100; 430907000
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38
IT **Photoresists**
(polymer blend for **photoresist** composition)
IT Polymer blends
(polymer blend for **photoresist** composition)
IT Photolithography
(vacuum UV; polymer blend for **photoresist** composition)
IT **370866-15-2P 478623-16-4P 594855-58-0P 594855-59-1P**
(polymer blend for **photoresist** composition)
IT 370102-75-3
(polymer blend for **photoresist** composition)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 5 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:367023 HCAPLUS
DOCUMENT NUMBER: 138:376411
TITLE: Polymer for chemical **amplification** -type resist
INVENTOR(S): Fujiwara, Tadayuki; Kuwano, Hideaki; Wakisaka, Yukiya; Kamon, Yoshihiro
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003140346	A2	20030514	JP 2001-338138	2001 1102

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PRIORITY APPLN. INFO.: JP 2001-338138 2001 1102

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AB The polymer comprises a monomer with an optical active lactone group as a structural unit and an optional other monomer and becomes soluble in alkaline solution by the action of an acid. The resist contains the polymer and a photo-acid generator. The resist is

useful for laser and electron beam lithog. and shows high resolution

IT **521291-58-7P**, (S)-β-Methacryloyloxy-γ-butyrolactone-2-methacryloyloxy-2-methyladamantane copolymer
521291-60-1P, (R)-β-Methacryloyloxy-γ-butyrolactone-2-methacryloyloxy-2-methyladamantane copolymer
(chemical **amplification**-type **photoresist** containing polymer of optically active lactone acrylate)

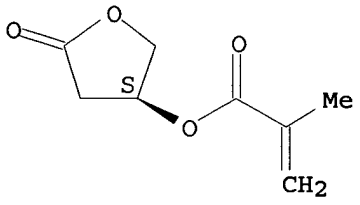
RN 521291-58-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with (3S)-tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

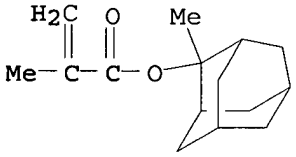
CRN 521291-57-6
CMF C8 H10 O4

Absolute stereochemistry.



CM 2

CRN 177080-67-0
CMF C15 H22 O2



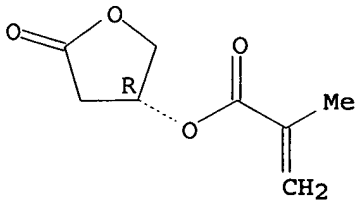
RN 521291-60-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with (3R)-tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

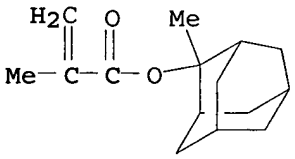
CRN 521291-59-8
CMF C8 H10 O4

Absolute stereochemistry.



CM 2

CRN 177080-67-0
CMF C15 H22 O2



IC ICM G03F007-039
ICS C08F020-26; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
ST photoresist optical active lactone acrylate polymer; chem **amplification resist** photoacid generator
IT **Photoresists**
(chemical **amplification**-type **photoresist** containing polymer of optically active lactone acrylate)
IT **521291-58-7P**, (S)-β-Methacryloyloxy-γ-butyrolactone-2-methacryloyloxy-2-methyladamantane copolymer **521291-60-1P**, (R)-β-Methacryloyloxy-γ-butyrolactone-2-methacryloyloxy-2-methyladamantane copolymer
(chemical **amplification**-type **photoresist** containing polymer of optically active lactone acrylate)
IT 66003-78-9, Triphenylsulfonium triflate
(photoacid generator; chemical **amplification**-type **photoresist** containing polymer of optically active lactone acrylate)

L31 ANSWER 6 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:41953 HCAPLUS
DOCUMENT NUMBER: 138:115051
TITLE: Photoresist with reaction anchors for a chemical **amplification** of resist patterns for exposure with 157 nm
INVENTOR(S): Rottstegge, Joerg; Eschbaumer, Christian; Hohle, Christoph; Herbst, Waltraud; Sebald, Michael
PATENT ASSIGNEE(S): Infineon Technologies A.-G., Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: **Patent**
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10131670	A1	20030116	DE 2001-10131670 <--	20010629
US 2003087182	A1	20030508	US 2002-186657 <--	20020701
US 7033740	B2	20060425		

PRIORITY APPLN. INFO.: DE 2001-10131670 A 20010629 <--

AB The invention relates to a chemical amplified resist comprising a film forming polymer, a photoacid generator and a solvent. The film forming polymer contains acid-labile groups and becomes alkaline-soluble upon the reaction with the acid. The film forming polymer comprises polymer structural units, derived from fluoridated monomers, and a group of anchors for the binding of an **amplification** agent. The transparency of the resist is substantially increased by the fluorination of the polymer structural units with an exposure wave length by 157 nm, so that resist patterns with increased coating thickness can be obtained.

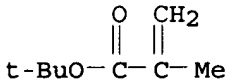
IT **390746-59-5P**, tert-Butyl methacrylate-2-(trifluoromethyl)acrylic acid copolymer
(**photoresist** with reaction anchors for a chemical **amplification** of **resist** patterns for exposure with 157 nm)

RN 390746-59-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 2-(trifluoromethyl)-2-propenoic acid (9CI) (CA INDEX NAME)

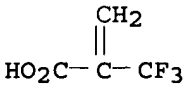
CM 1

CRN 585-07-9
CMF C8 H14 O2



CM 2

CRN 381-98-6
CMF C4 H3 F3 O2



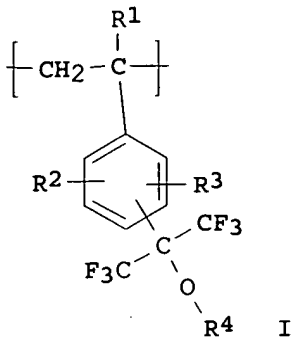
IC ICM G03F007-039
ICS G03F007-38
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38, 76
ST photoresist chem **amplification resist** pattern reaction anchor
IT **Photoresists**
(chemical amplified; **photoresist** with reaction anchors for a chemical **amplification** of **resist** patterns for exposure with 157 nm)
IT **390746-59-5P**, tert-Butyl methacrylate-2-(trifluoromethyl)acrylic acid copolymer
(**photoresist** with reaction anchors for a chemical **amplification** of **resist** patterns for exposure with 157 nm)

L31 ANSWER 7 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:40248 HCAPLUS
DOCUMENT NUMBER: 138:115049
TITLE: Chemically amplified positive photoresist fluoropolymer compositions with high resolution and transparency to F2 excimer laser beams, and their deposition method
INVENTOR(S): Kanna, Shinichi; Mizutani, Kazuyoshi
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003015301	A2	20030117	JP 2001-203565 <--	2001 0704

PRIORITY APPLN. INFO.: JP 2001-203565 <-- 2001 0704

GI



I

AB The compns. comprise (A) fluoropolymers, which increase their alkali-solubility in the presence of acids, having repeating units I (R1 = H, F, alkyl; R2, R3 = H, OH, halo, cyano, alkoxy, aryl, etc.; R4 = H, alkyl, acyl, R5R6COR7, etc.; R5, R6 = H, alkyl, cycloalkyl; R7 = alkyl, cycloalkyl, aralkyl, aryl), (B) photoacid generators, and (C) solvents, wherein the compns. are heated at 110-150° in deposition.

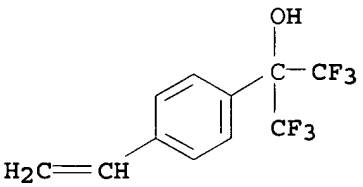
IT **370866-15-2P 462109-81-5P 462109-83-7P 462109-89-3P 487048-93-1P**
(F-containing styrene polymers for chemical amplified pos. **photoresists** with high resolution and transparency to F2 excimer laser beams)

RN 370866-15-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 4-ethenyl-α,α-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

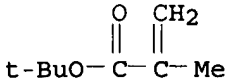
CM 1

CRN 2386-82-5
CMF C11 H8 F6 O



CM 2

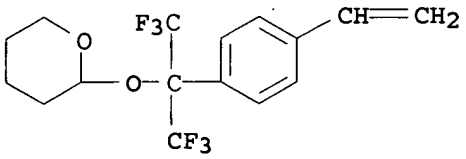
CRN 585-07-9
CMF C8 H14 O2



RN 462109-81-5 HCAPLUS
CN 2-Propenenitrile, 2-methyl-, polymer with 2-[1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

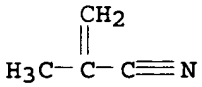
CM 1

CRN 430437-02-8
CMF C16 H16 F6 O2



CM 2

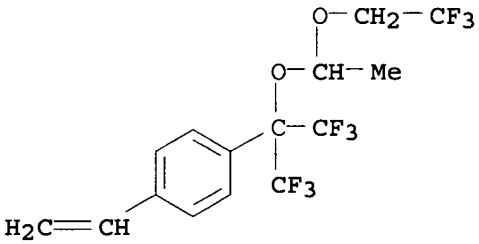
CRN 126-98-7
CMF C4 H5 N



RN 462109-83-7 HCAPLUS
CN 2-Propenenitrile, 2-methyl-, polymer with 1-ethenyl-4-[2,2,2-trifluoro-1-[1-(2,2,2-trifluoroethoxy)ethoxy]-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

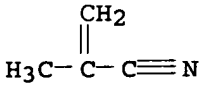
CM 1

CRN 462109-82-6
CMF C15 H13 F9 O2



CM 2

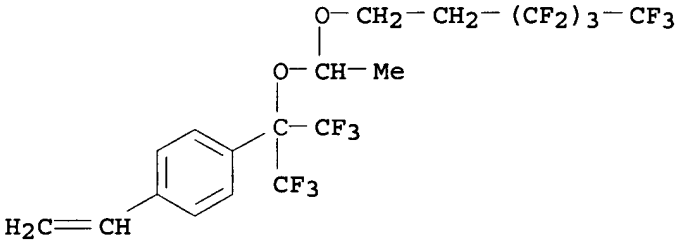
CRN 126-98-7
CMF C4 H5 N



RN 462109-89-3 HCAPLUS
CN 2-Propenenitrile, 2-methyl-, polymer with 1-ethenyl-4-[2,2,2-trifluoro-1-[1-[(3,3,4,4,5,5,6,6,6-nonafluorohexyl)oxy]ethoxy]-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

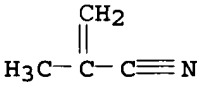
CM 1

CRN 462109-88-2
CMF C19 H15 F15 O2



CM 2

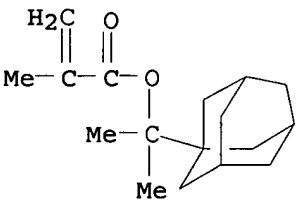
CRN 126-98-7
CMF C4 H5 N



RN 487048-93-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl ester, polymer with 4-ethenyl-α,α-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

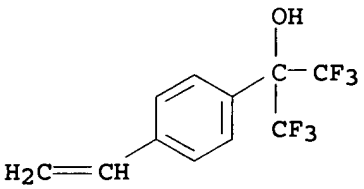
CM 1

CRN 279218-76-7
CMF C17 H26 O2



CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



IC ICM G03F007-039
ICS C08F012-14; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST pos photoresist fluorine excimer laser transparency; chem **amplification photoresist** resoln excimer laser; styrene fluoropolymer photoresist fluorine excimer laser
IT Positive **photoresists**
(F-containing styrene polymers for chemical amplified pos. **photoresists** with high resolution and transparency to F2 excimer laser beams)
IT Fluoropolymers, processes
(F-containing styrene polymers for chemical amplified pos. **photoresists** with high resolution and transparency to F2 excimer laser beams)
IT 109-92-2DP, Ethyl vinyl ether, ethers with F-containing acrylic styrene polymers **370866-15-2P** 397302-29-3P
430437-01-7DP, ethers with Et vinyl ether 430437-07-3P
462109-81-5P **462109-83-7P** 462109-85-9P
462109-89-3P 462109-91-7P 462109-95-1P 487048-75-9P
487048-76-0P 487048-77-1P 487048-78-2P 487048-79-3P
487048-81-7P 487048-82-8P 487048-83-9P 487048-85-1P
487048-86-2P 487048-87-3P 487048-88-4P 487048-89-5P
487048-90-8P 487048-92-0P **487048-93-1P** 487048-94-2P
487048-95-3P
(F-containing styrene polymers for chemical amplified pos. **photoresists** with high resolution and transparency to F2 excimer laser beams)

L31 ANSWER 8 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:850191 HCAPLUS
DOCUMENT NUMBER: 137:360314
TITLE: Fluorine-containing styrene acrylate copolymers and use thereof in lithographic photoresist compositions
INVENTOR(S): Allen, Robert David; Brock, Phillip Joe; Ito, Hiroshi; Wallraff, Gregory Michael
PATENT ASSIGNEE(S): International Business Machines Corporation, USA
SOURCE: U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO
DOCUMENT TYPE: **Patent**
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002164538	A1	20021107	US 2001-794466	2001 0226 <--
US 6610456	B2	20030826		
PRIORITY APPLN. INFO.:			US 2001-794466	2001 0226 <--

AB Copolymers are prepared by radical polymerization of a fluorine-containing aromatic monomer and an acrylate-based comonomer that may or may not be fluorinated. The polymers are useful in lithog. photoresist compns., particularly chemical **amplification resists.** The polymers are substantially transparent to deep UV (DUV) radiation, i.e., radiation of a wavelength < 250 nm, including 157 nm and 248 nm radiation, and are thus useful in DUV lithog. photoresist compns. A method for using the composition to generate resist images on a substrate is also provided, i.e., in the manufacture of integrated circuits or the like.

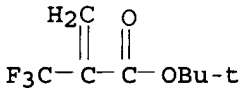
IT **370866-13-0P**, tert-Butyl α-trifluoromethylacrylate-p-(Hexafluoro-2-hydroxypropyl)styrene copolymer **370866-15-2P**, p-(Hexafluoro-2-hydroxypropyl)styrene-tert-butyl methacrylate copolymer
(fluorine-containing styrene acrylate copolymers for lithog. **photoresist** compns.)

RN 370866-13-0 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 4-ethenyl-α,α-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

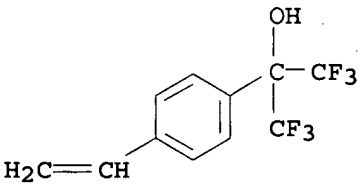
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

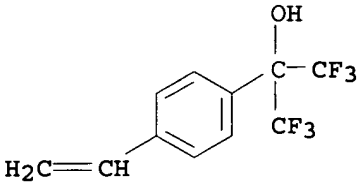
CRN 2386-82-5
CMF C11 H8 F6 O



RN 370866-15-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 4-ethenyl-α,α-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

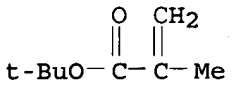
CM 1

CRN 2386-82-5
CMF C11 H8 F6 O



CM 2

CRN 585-07-9
CMF C8 H14 O2



IC ICM G03F007-038
ICS G03F007-20; G03F007-26
INCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76
IT Photolithography
(UV vacuum; fluorine-containing styrene acrylate copolymers and use thereof in lithog. **photoresist** compns.)
IT **Photoresists**
(fluorine-containing styrene acrylate copolymers and use thereof in lithog. **photoresist** compns.)
IT Semiconductor device fabrication
(fluorine-containing styrene acrylate copolymers for lithog. **photoresist** compns.)
IT **370866-13-0P**, tert-Butyl α-trifluoromethylacrylate-p-(Hexafluoro-2-hydroxypropyl)styrene copolymer **370866-15-2P**, p-(Hexafluoro-2-hydroxypropyl)styrene-tert-butyl methacrylate copolymer
(fluorine-containing styrene acrylate copolymers for lithog. **photoresist** compns.)
IT 474635-14-8P 474635-15-9P 474635-16-0P 474635-17-1P
(fluorine-containing styrene acrylate copolymers for lithog. **photoresist** compns.)
IT 240435-11-4
(photoacid generator; fluorine-containing styrene acrylate copolymers for lithog. **photoresist** compns.)

IT 335-08-0P, 1,1,1-Trifluoroacetone cyanohydrin 381-84-0P, 2-(Trifluoromethyl)acrylonitrile 382-90-1P, Methyl α-(trifluoromethyl)acrylate
(preparation of fluorine-containing styrene acrylate copolymers for lithog. **photoresist** compns.)
IT 75-65-0, t-Butanol, reactions 79-37-8, Oxalyl chloride 108-24-7, Acetic anhydride 143-33-9, Sodium cyanide 421-50-1, 1,1,1-Trifluoroacetone 684-16-2, Hexafluoroacetone 2039-82-9, 4-Bromostyrene
(preparation of fluorine-containing styrene acrylate copolymers for lithog. **photoresist** compns.)
IT 337-16-6P 381-98-6P, 2-(Trifluoromethyl)acrylic acid 382-43-4P, 3-Hydroxy-2-(Trifluoromethyl)propionic acid 2386-82-5P 4588-51-6P 105935-24-8P
(preparation of fluorine-containing styrene acrylate copolymers for lithog. **photoresist** compns.)

L31 ANSWER 9 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:807548 HCAPLUS
DOCUMENT NUMBER: 137:331078
TITLE: Radiation-sensitive resin composition containing polycyclic compound for chemical **amplification resist**
INVENTOR(S): Yamamoto, Masashi; Ishida, Hidemitsu; Ishii, Hiroyuki; Kajita, Toru
PATENT ASSIGNEE(S): JSR Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 61 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002311590	A2	20021023	JP 2001-113462	2001 0412
			<--	
PRIORITY APPLN. INFO.:			JP 2001-113462	2001 0412
			<--	

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT
*

AB The radiation-sensitive resin composition comprises (1) a hardly alkaline soluble resin or a alkaline insol. resin, which, becoming alkaline soluble by reaction with an acid, has repeating units selected from I, II, III (R1,3,5 = H, Me; R2,4,6 = H, C1-4alkyl; X = methylene, O, S; a = integer 1-5) and a repeating unit [CR7(COOCR83)CH2] (R7 = H, Me; R8 = C4-20 monovalent aliphatic hydrocarbon, etc.), (2) an photoacid, and (3) a polycyclic compound having the mol. weight ≤1,000. The radiation-sensitive resin composition provided a fine pattern when

it is used as a far-UV photoresist.

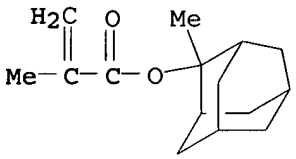
IT **195000-69-2P**
(far-UV chemical **amplification**-type **photoresist** resin composition from)

RN 195000-69-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

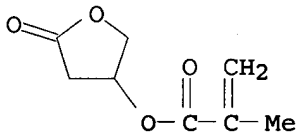
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

CRN 130224-95-2
CMF C8 H10 O4



IC ICM G03F007-039
ICS C08F220-18; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38

ST chem **amplification resist** resin compn polycyclic compd; far UV photoresist compn

IT **Photoresists**
(far-UV chemical **amplification**-type **photoresist** resin composition containing polycyclic compound)

IT 1148-79-4, 2,2':6',2''-Terpyridine 193810-83-2, N-tert-Butoxycarbonyl-2-phenylbenzimidazole 330576-56-2, N-t-Butoxycarbonyldicyclohexylamine
(acid diffusion suppressing agent; far-UV chemical **amplification**-type **photoresist** resin composition from)

IT **195000-69-2P** 340964-38-7P 340964-44-5P 473699-88-6P 473699-89-7P
(far-UV chemical **amplification**-type **photoresist** resin composition from)

IT 157692-53-0, tert-Butyl deoxycholate 213901-06-5 231296-44-9
(far-UV chemical **amplification**-type **photoresist** resin composition from)

IT 194999-85-4 209482-18-8 307531-76-6 380886-84-0
(photoacid; far-UV chemical **amplification**-type **photoresist** resin composition from)
IT 96-48-0, γ-Butyrolactone 108-94-1, Cyclohexanone, uses 110-43-0, 2-Heptanone 84540-57-8, Propylene glycol monomethyl ether acetate
(solvent; far-UV chemical **amplification**-type **photoresist** resin composition from)

L31 ANSWER 10 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:778584 HCAPLUS
DOCUMENT NUMBER: 137:302228
TITLE: Chemically amplified photoresist compositions comprising norbornene fluoroacrylate copolymers and photolithographic process
INVENTOR(S): Ito, Hiroshi; Miller, Dolores Carlotta; Brock, Phillip Joe; Wallraff, Gregory Michael
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO
DOCUMENT TYPE: **Patent**
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

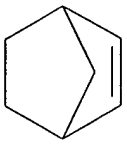
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002146638	A1	20021010	US 2001-771149	2001 0126 <--
US 6509134	B2	20030121		

PRIORITY APPLN. INFO.: US 2001-771149 2001 0126 <--

AB Novel norbornene fluoroacrylate copolymers are provided. The polymers are useful in lithog. photoresist compns., particularly chemical **amplification resists.** In a preferred embodiment, the polymers are substantially transparent to deep UV (DUV) radiation, i.e., radiation of a wavelength less than 250 nm, including 157 nm, 193 nm and 248 nm radiation, and are thus useful in DUV lithog. photoresist compns. A process for using the composition to generate resist images on a substrate is also provided, i.e., in the manufacture of integrated circuits or the like.
IT **370866-19-6P**, Norbornene-2-(Trifluoromethyl)acrylic acid copolymer **370866-24-3P**
(chemical amplified **photoresist** compns. comprising norbornene fluoroacrylate copolymers)
RN 370866-19-6 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, polymer with bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

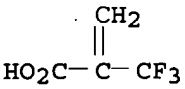
CM 1

CRN 498-66-8
CMF C7 H10



CM 2

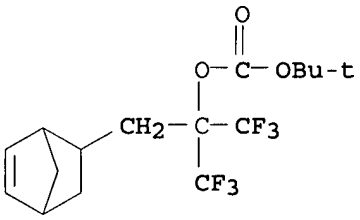
CRN 381-98-6
CMF C4 H3 F3 O2



RN 370866-24-3 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, methyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

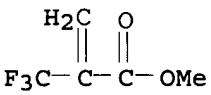
CM 1

CRN 196314-63-3
CMF C16 H20 F6 O3



CM 2

CRN 382-90-1
CMF C5 H5 F3 O2



IC ICM G03F007-038
ICS G03F007-26
INCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 37, 38, 76
IT **Photoresists**

(UV; chemical amplified **photoresist** compns. comprising norbornene fluoroacrylate copolymers)

IT Photolithography
(UV; chemical amplified **photoresist** compns. comprising norbornene fluoroacrylate copolymers and photolithog. process)

IT Fluoropolymers, properties
(chemical amplified **photoresist** compns. comprising norbornene fluoroacrylate copolymers)

IT Semiconductor device fabrication
(chemical amplified **photoresist** compns. comprising norbornene fluoroacrylate copolymers and photolithog. process in relation to)

IT **370866-19-6P**, Norbornene-2-(Trifluoromethyl)acrylic acid copolymer **370866-24-3P** 469904-69-6P
(chemical amplified **photoresist** compns. comprising norbornene fluoroacrylate copolymers)

IT 335-08-0P, 1,1,1-Trifluoroacetone cyanohydrin 381-84-0P, 2-(Trifluoromethyl)acrylonitrile 381-98-6P, 2-(Trifluoromethyl)acrylic acid 382-43-4P, 3-Hydroxy-2-(trifluoromethyl)propionic acid 382-90-1P, Methyl 2-(Trifluoromethyl)acrylate 4588-51-6P 105935-24-8P 196314-61-1P 196314-63-3P 370866-43-6P 469904-68-5P
(in preparation of copolymers for chemical amplified **photoresist** compns.)

IT 79-37-8, Oxalyl chloride 421-50-1, 1,1,1-Trifluoroacetone 542-92-7, Cyclopentadiene, reactions 684-16-2
(in preparation of copolymers for chemical amplified **photoresist** compns.)

IT 337-16-6P 428-18-2P
(in preparation of copolymers for chemical amplified **photoresist** compns.)

L31 ANSWER 11 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:673047 HCAPLUS
DOCUMENT NUMBER: 137:224108
TITLE: Storage-stable excimer laser-sensitive positive-working photosensitive compositions with reduced pattern variation on defocusing
INVENTOR(S): Kodama, Kunihiko; Sato, Kenichiro
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 86 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002251012	A2	20020906	JP 2001-48784 <--	20010223
US 2003017415	A1	20030123	US 2002-79414 <--	20020222
US 6858370	B2	20050222		
TW 548523	B	20030821	TW 2002-91103178	

2002
0222
<--

PRIORITY APPLN. INFO.: JP 2001-48602 A
2001
0223
<--
JP 2001-48783 A
2001
0223
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JP 2001-48784 A
2001
0223
<--
JP 2001-48880 A
2001
0223
<--
JP 2001-157366 A
2001
0525
<--
JP 2001-157367 A
2001
0525
<--

AB The compns. comprise (A) photoacid generators, (B) resins containing alicyclic hydrocarbon structures, which increase their alkali solubility by acid decomposition, (C) base compds., and (D) fluoro- and/or silicone-based surfactants, wherein the photoacid generator is a mixture of triarylsulfonium salts and non-aromatic sulfonium salts. The compns. are useful for chemical amplified photoresists suitable for halftone phase-shift masks.

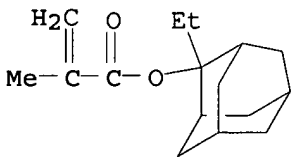
IT **250378-10-0P**, Butyrolactone methacrylate-2-ethyl-2-adamantyl methacrylate copolymer
(chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

RN 250378-10-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

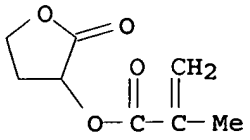
CM 1

CRN 209982-56-9
CMF C16 H24 O2



CM 2

CRN 195000-66-9
CMF C8 H10 O4



IC ICM G03F007-039
ICS C08K005-00; C08K005-36; C08L101-00; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST pos photoresist excimer laser storage stability; chem **amplification photoresist** arylsulfonium photoacid generator
IT Positive **photoresists**
(UV; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)
IT Sulfonium compounds
(arene, photoacid generators; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)
IT Surfactants
(fluorosurfactants; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)
IT Cycloalkenes
(polymers; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)
IT Aromatic compounds
(sulfonium, photoacid generators; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)
IT Polysiloxanes, uses
(surfactant; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)
IT 66003-78-9 144317-44-2 177034-80-9 258872-05-8 284474-28-8 338445-24-2 391232-40-9 398141-18-9 421555-72-8
(aromatic sulfonyl photoacid generator; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)
IT 484-47-9, 2,4,5-Triphenylimidazole 621-77-2, Tripentylamine 3001-72-7, 1,5-Diazabicyclo[4.3.0]non-5-ene 3040-44-6, 1-Piperidineethanol 19293-63-1, Dicyclohexylmethylamine 19600-49-8, Triphenylsulfonium acetate
(base compound; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)
IT 3744-08-9P, Triphenylsulfonium iodide 303177-16-4P
(chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on

defocusing)

IT **250378-10-0P**, Butyrolactone methacrylate-2-ethyl-2-adamantyl methacrylate copolymer 288303-55-9P 364736-22-1P 391232-36-3P 391613-77-7P 398140-36-8P 398140-38-0P 398140-40-4P 398140-43-7P 398140-45-9P 398140-50-6P 398140-52-8P 398140-54-0P 398140-55-1P 398140-57-3P 398140-59-5P 398140-60-8P 398140-62-0P 398140-64-2P 398140-65-3P 398140-68-6P 398140-69-7P 398140-71-1P 398140-72-2P 398140-73-3P 398140-74-4P 398140-75-5P 398140-76-6P 398140-77-7P 398140-78-8P 398140-79-9P 398140-80-2P 398140-81-3P 398140-82-4P 398140-84-6P 398140-85-7P 398140-86-8P 398140-87-9P 398140-88-0P, tert-Butyl norbornenecarboxylate-maleic anhydride-2-methyl-2-adamantyl acrylate-norbornenelactone acrylate copolymer 398140-89-1P 398140-90-4P 398140-91-5P 398140-92-6P 398140-93-7P 398140-94-8P 398140-95-9P 398140-97-1P 398140-98-2P 398140-99-3P 398141-00-9P 398141-03-2P 398141-04-3P 398141-06-5P 398141-07-6P 398141-08-7P 398141-10-1P 398141-11-2P 398141-13-4P 398141-14-5P 398141-16-7P 398152-52-8P 405509-18-4P 405509-29-7P 405509-30-0P 455521-67-2P 455521-72-9P
(chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 71-43-2, Benzene, reactions 110-01-0, Tetrahydrothiophene 945-51-7, Diphenylsulfoxide 1763-23-1, Perfluorooctanesulfonic acid 5469-26-1, 1-Bromo-3,3-dimethyl-2-butanone 12027-06-4, Ammonium iodide 29420-49-3, Potassium perfluorobutanesulfonate 218151-20-3 455947-79-2
(chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 160481-39-0 301153-78-6 371921-65-2 383367-32-6 393171-41-0 455521-76-3 455521-81-0 455521-85-4 455521-89-8
(non-aromatic sulfonyl photoacid generator; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 171292-12-9
(photoacid generator; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 144089-15-6P 241806-75-7P 347193-29-7P
(photoacid generator; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 96-48-0, γ-Butyrolactone 97-64-3, Ethyl lactate 108-94-1, Cyclohexanone, uses 110-43-0, 2-Heptanone 763-69-9 1320-67-8, Propylene glycol methyl ether 84540-57-8, Propylene glycol methyl ether acetate
(solvent; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

IT 137462-24-9, Megafac F 176 216679-67-3, Megafac R 08
(surfactant; chemical amplified storage-stable excimer laser-sensitive pos. **photoresists** with reduced pattern variation on defocusing)

L31 ANSWER 12 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:575606 HCAPLUS
DOCUMENT NUMBER: 137:132114
TITLE: Substituted norbornene fluoroacrylate copolymers and use thereof lithographic photoresist compositions
INVENTOR(S): Ito, Hiroshi; Brock, Phillip Joe; Wallraff, Gregory Michael
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DOCUMENT TYPE: **Patent**
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002102490	A1	20020801	US 2001-771262	2001 0126
US 6548219	B2	20030415		

PRIORITY APPLN. INFO.: US 2001-771262 2001 0126

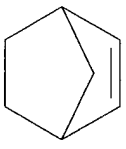
AB Copolymers prepared by radical polymerization of a substituted norbornene monomer and a fluoromethacrylic acid, fluoromethacrylonitrile, or fluoromethacrylate comonomer are provided. The polymers are useful in lithog. photoresist compns., particularly chemical **amplification resists.** In a preferred embodiment, the polymers are substantially transparent to deep UV (DUV) radiation, i.e., radiation of a wavelength < 250 nm, including 157 nm, 193 nm and 248 nm radiation, and are thus useful in DUV lithog. photoresist compns. A process for using the composition to generate resist images on a substrate is also provided, i.e., in the manufacture of integrated circuits or the like.

IT **370866-19-6P**
(substituted norbornene fluoroacrylate copolymers for lithog. **photoresist** compns.)

RN 370866-19-6 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, polymer with bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

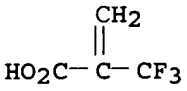
CM 1

CRN 498-66-8
CMF C7 H10



CM 2

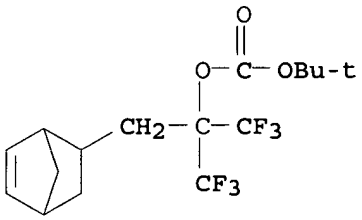
CRN 381-98-6
CMF C4 H3 F3 O2



IT **370866-24-3P**
(substituted norbornene fluoroacrylate copolymers for lithog. **photoresist** compns.)
RN 370866-24-3 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, methyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

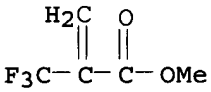
CM 1

CRN 196314-63-3
CMF C16 H20 F6 O3



CM 2

CRN 382-90-1
CMF C5 H5 F3 O2



IC ICM G03F007-039
ICS G03F007-30
INCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38
IT Photolithography
(UV; substituted norbornene fluoroacrylate copolymers for lithog. **photoresist** compns.)
IT **Photoresists**
(substituted norbornene fluoroacrylate copolymers for lithog. **photoresist** compns.)
IT 335-08-0P, 1,1,1-Trifluoroacetone cyanohydrin 381-84-0P,

2-(Trifluoromethyl)acrylonitrile 382-90-1P 196314-61-1P
196314-63-3P 214079-66-0P
(preparation of substituted norbornene fluoroacrylate copolymers for lithog. **photoresist** compns.)
IT 57-12-5, Cyanide, reactions 75-65-0, tert-Butanol, reactions
79-37-8, Oxalyl chloride 108-24-7, Acetic anhydride 421-50-1,
1,1,1-Trifluoroacetone 542-92-7, Cyclopentadiene, reactions
1314-56-3, Phosphorus pentoxide, reactions
(preparation of substituted norbornene fluoroacrylate copolymers for lithog. **photoresist** compns.)
IT 337-16-6P 381-98-6P, 2-(Trifluoromethyl)acrylic acid
382-43-4P, 3-Hydroxy-2-(trifluoromethyl)propionic acid 428-18-2P
4588-51-6P 105935-24-8P
(preparation of substituted norbornene fluoroacrylate copolymers for lithog. **photoresist** compns.)
IT **370866-19-6P**
(substituted norbornene fluoroacrylate copolymers for lithog. **photoresist** compns.)
IT **370866-24-3P** 370866-47-0P
(substituted norbornene fluoroacrylate copolymers for lithog. **photoresist** compns.)

L31 ANSWER 13 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:449670 HCAPLUS
DOCUMENT NUMBER: 137:39324
TITLE: (Meth)acrylate esters, starting alcohols for the preparation thereof, processes for preparing both, polymers of the esters, chemically amplifiable resist compositions, and method for forming patterns
INVENTOR(S): Kamon, Yoshihiro; Fujiwara, Tadayuki; Kuwano, Hideaki; Momose, Hikaru; Koizumi, Atsushi
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: PCT Int. Appl., 109 pp.
CODEN: PIXXD2
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002046179	A1	20020613	WO 2001-JP10628	2001 1205
			<--	
WO 2002046179	C1	20020808		
W: KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2002234882	A2	20020823	JP 2001-366958	2001 1130
			<--	
JP 2002275215	A2	20020925	JP 2001-368904	2001 1203
			<--	
EP 1352904	A1	20031015	EP 2001-999568	

2001
1205
<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR
TW 583182 B 20040411 TW 2001-90130267
2001
1206
<--
US 2004063882 A1 20040401 US 2003-433570
2003
0605
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US 2005113538 A1 20050526 US 2004-974876
2004
1028
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PRIORITY APPLN. INFO.: JP 2000-371712 A
2000
1206
<--
JP 2001-1728 A
2001
0109
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JP 2001-366958 A
2001
1130
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JP 2001-368904 A
2001
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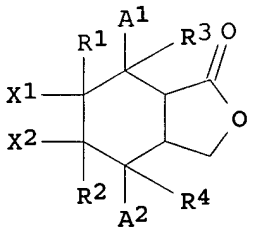
WO 2001-JP10628 W
2001
1205
<--
OTHER SOURCE(S): MARPAT 137:39324
GI



I

AB (Meth)acrylate esters are represented by the general formula I (R1-4 = H, Me, Et; one of X1 and X2 is (meth)acryloyloxy and the other is H; A1 and A2 are H or form O, CH2, CH2CH2). These esters can be prepared by preparing a product of addition of a 1,3-diene with maleic anhydride by Diels-Alder reaction, reducing this product into a lactone, hydrating this lactone into an alc., and

esterifying this alc. with (meth)acrylic acid. The (co)polymers produced by polymerizing monomer compns. containing the (meth)acrylate esters are excellent in transparency, dry-etching resistance, and solubility in organic solvents, and useful as resins for chemical amplifiable resist compns.

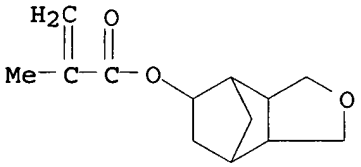
IT **436852-43-6P 436852-44-7P 436852-45-8P 436852-46-9P**
(preparation of (meth)acrylate-based chemical **amplification** -type **resist**)

RN 436852-43-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with octahydro-1(or 3)-oxo-4,7-methanoisobenzofuran-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

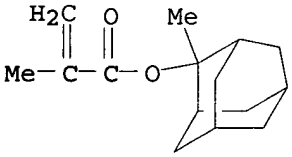
CRN 436852-34-5
CMF C13 H16 O4
CCI IDS



D2═O

CM 2

CRN 177080-67-0
CMF C15 H22 O2

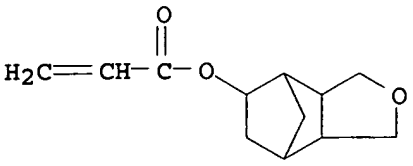


RN 436852-44-7 HCAPLUS

CN 2-Propenoic acid, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with octahydro-1(or 3)-oxo-4,7-methanoisobenzofuran-5-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

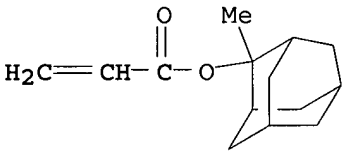
CRN 436852-35-6
CMF C12 H14 O4
CCI IDS



D2═O

CM 2

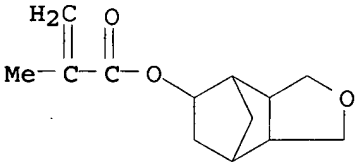
CRN 249562-06-9
CMF C14 H20 O2



RN 436852-45-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with octahydro-1(or 3)-oxo-4,7-methanoisobenzofuran-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

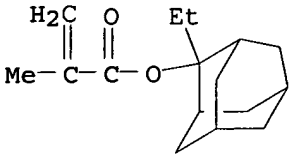
CRN 436852-34-5
CMF C13 H16 O4
CCI IDS



D2═O

CM 2

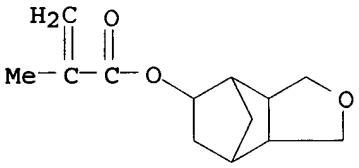
CRN 209982-56-9
CMF C16 H24 O2



RN 436852-46-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl ester, polymer with octahydro-1(or 3)-oxo-4,7-methanoisobenzofuran-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

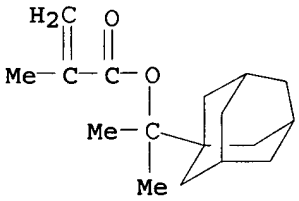
CRN 436852-34-5
CMF C13 H16 O4
CCI IDS



D2═O

CM 2

CRN 279218-76-7
CMF C17 H26 O2



IC ICM C07D307-93
ICS C07D307-88; C07D493-18; C07D307-77; C07D493-18; C07D307-04; C07D307-33
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 27, 35, 38
ST methacrylate acrylate ester copolymer electron beam resist photoresist; chem **amplification resist**
IT Electron beam **resists**
Photoresists

((meth)acrylate-based chemical **amplification**-type **resist**)

IT Diels-Alder reaction
(preparation of (meth)acrylate-based chemical **amplification**-type **resist**)

IT 66003-78-9, Triphenylsulfoniumtriflate
(photoacid; (meth)acrylate-based chemical **amplification**-type **resist**)

IT 80-62-6, Methyl methacrylate 85-43-8 108-31-6, Maleic anhydride, reactions 760-93-0, Methacrylic anhydride 826-62-0, 5-Norbornene-2,3-dicarboxylic anhydride 920-46-7, Methacrylic acid chloride 6118-51-0, exo-3,6-Epoxy-1,2,3,6-tetrahydrophthalic anhydride 25134-21-8, Methyl-5-norbornene-2,3-dicarboxylic anhydride
(preparation of (meth)acrylate-based chemical **amplification**-type **resist**)

IT 24327-08-0P, endo-Bicyclo[2.2.2]octo-5-ene-2,3-dicarboxylic anhydride 85718-44-1P, 4-Oxatricyclo[5.2.1.02,6]-8-decene-3-one 436852-32-3P 436852-33-4P 436852-34-5P 436852-35-6P 436852-36-7P 436852-37-8P 436852-38-9P 436852-40-3P 436852-41-4P 436852-42-5P
(preparation of (meth)acrylate-based chemical **amplification**-type **resist**)

IT **436852-43-6P 436852-44-7P 436852-45-8P 436852-46-9P** 436852-47-0P 436852-48-1P 436852-49-2P 436852-50-5P 436852-51-6P 436852-52-7P 436852-54-9P 436852-57-2P 436852-59-4P
(preparation of (meth)acrylate-based chemical **amplification**-type **resist**)

IT 97-64-3, Ethyl lactate 84540-57-8, Propylene glycol monomethylether acetate
(preparation of (meth)acrylate-based chemical **amplification**-type **resist**)

IT 68-12-2, N,N-Dimethylformamide, uses 108-65-6, 2-Acetoxy-1-methoxypropane 109-99-9, Tetrahydrofuran, uses 123-91-1, 1,4-Dioxane, uses
(solvent; preparation of (meth)acrylate-based chemical **amplification**-type **resist**)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 14 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:349275 HCAPLUS
DOCUMENT NUMBER: 136:377476
TITLE: Chemically amplified positive-working photoresist compositions for excimer laser development with high sensitivity and resolution
INVENTOR(S): Fujimori, Toru; Tan, Shiro; Nakao, Hajime
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2002131910 A2 20020509 JP 2000-325915
2000
1025
<--
PRIORITY APPLN. INFO.: JP 2000-325915
2000
1025
<--

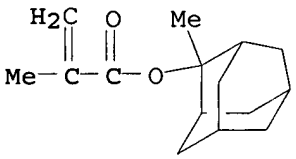
AB The compns. comprise (A) photoacid generators, (B) resins having alicyclic hydrocarbon structures, which are decomposed by acids to increase their alkali-solubility, and (C) RWCO2B (R = alkyl, alicyclic ring-containing group; W = divalent organic group; B = acid-decomposable group). The photoresists are useful for micro-photofabrication by far UV radiation at ≤250 nm wavelength.

IT **177080-68-1P 195000-67-0P 297156-40-2P**
324770-96-9P 357413-69-5P 357413-70-8P
(chemical amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resolution)

RN 177080-68-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

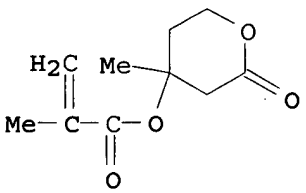
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

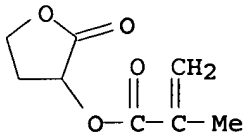
CRN 177080-66-9
CMF C10 H14 O4



RN 195000-67-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

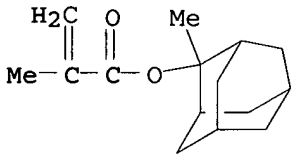
CM 1

CRN 195000-66-9
CMF C8 H10 O4



CM 2

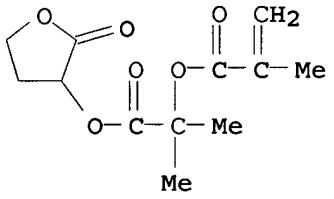
CRN 177080-67-0
CMF C15 H22 O2



RN 297156-40-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethyl-2-oxo-2-[(tetrahydro-2-oxo-3-furanyl)oxy]ethyl ester, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

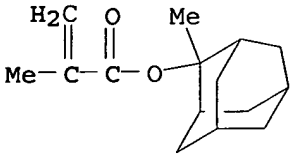
CM 1

CRN 288303-54-8
CMF C12 H16 O6



CM 2

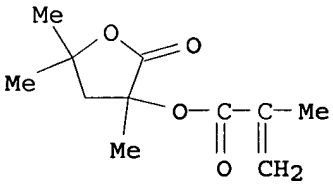
CRN 177080-67-0
CMF C15 H22 O2



RN 324770-96-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-3,5,5-trimethyl-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

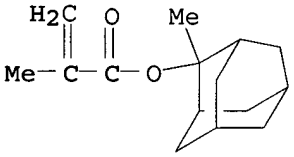
CM 1

CRN 324761-21-9
CMF C11 H16 O4



CM 2

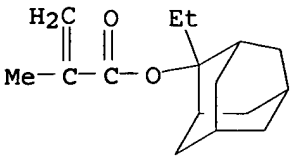
CRN 177080-67-0
CMF C15 H22 O2



RN 357413-69-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4,4-dimethyl-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

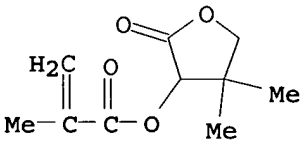
CM 1

CRN 209982-56-9
CMF C16 H24 O2



CM 2

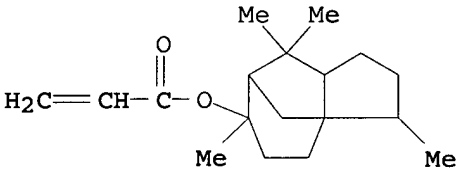
CRN 156938-13-5
CMF C10 H14 O4



RN 357413-70-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, tetrahydro-4,4-dimethyl-2-oxo-3-furanyl ester, polymer with octahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-6-yl 2-propenoate (9CI) (CA INDEX NAME)

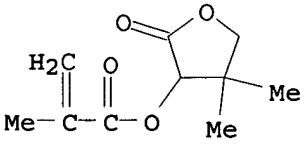
CM 1

CRN 313698-62-3
CMF C18 H28 O2



CM 2

CRN 156938-13-5
CMF C10 H14 O4



IC ICM G03F007-039
ICS C08F220-10; C08K005-00; C08L101-02; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST pos photoresist excimer laser sensitivity microphotofabrication; chem **amplification photoresist** ArF laser resoln

IT Positive **photoresists**
(chemical amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resolution)

IT Surfactants
(fluorosurfactants; chemical amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resolution)

IT Polysiloxanes, uses
(surfactant; chemical amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resolution)

IT 16537-07-8P **177080-68-1P** 181224-88-4P
195000-67-0P 195154-83-7P 216308-45-1P 288303-55-9P
297156-40-2P 304441-22-3P 307976-24-5P
324770-96-9P 357413-69-5P 357413-70-8P
357413-71-9P 410540-02-2P 410540-10-2P 410540-12-4P
(chemical amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resolution)

IT 110-87-2
(chemical amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resolution)

IT 122752-67-4, tert-Butyl cholate
(dissolving inhibitor; chemical amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resolution)

IT 66003-78-9, Triphenylsulfonium triflate 144089-15-6, Triphenylsulfonium perfluorooctanesulfonate 144317-44-2, Triphenylsulfonium perfluorobutanesulfonate 194999-85-4, Bis(4-tert-butylphenyl)iodonium perfluorobutanesulfonate
(photoacid generator; chemical amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resolution)

IT 484-47-9, 2,4,5-Triphenylimidazole 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2, 1,8-Diazabicyclo[5.4.0]-7-undecene
(**resist** containing; chemical amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resolution)

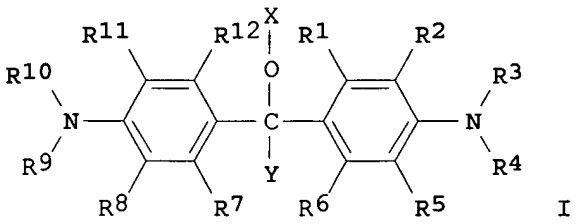
IT 137462-24-9, Megafac F 176 216679-67-3, Megafac R 08
(surfactant; chemical amplified pos. **photoresists** for ArF excimer laser development with high sensitivity and resolution)

L31 ANSWER 15 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:347846 HCAPLUS
DOCUMENT NUMBER: 136:361827
TITLE: Positive-working photoresist composition suitable for ArF excimer laser exposure
INVENTOR(S): Kawabe, Yasumasa
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

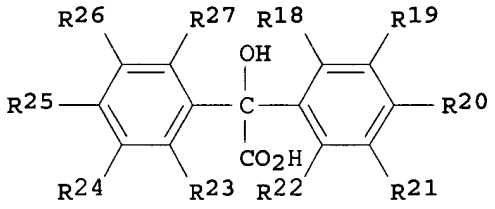
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002131914	A2	20020509	JP 2000-327358	2000 1026
			<--	
PRIORITY APPLN. INFO.:			JP 2000-327358	2000 1026
			<--	

OTHER SOURCE(S): MARPAT 136:361827

GI



I



II

AB A pos.-working chemical **amplification photoresist** composition comprises (A) a cycloaliph. polymer capable of becoming alkaline-soluble upon acid-induced decomposition, (B) a photoacid generator(s) capable of releasing acid upon ≤220 nm light irradiation, (C) a compound represented by I (R1-2, R5-8, R11-12 = H, OH, halo, C1-4-alkyl, C1-4-alkoxy; R3-4, R9-10 = C1-4-alkyl; X = H; X joining together with R1 may form ring; Y = H, Ph, substituted phenyl) or II (R18-27 = H, OH, halo, C1-4-alkyl, C1-4-alkoxy; R22 joining together with R23 may form ring), and (D) a fluoro- and/or silicone-surfactant(s), and optionally (E) an acid trapping agent. The photoresist composition may contain a low mol. weight compound having an acid decomposable group and a group capable of becoming alkaline-soluble upon contact with an acid. The photoresist composition shows improved line edge roughness and is suitable for semiconductor device fabrications by ArF excimer lasers.

IT **195000-67-0P**
(pos.-working chemical **amplification photoresist** composition exhibiting improved line edge roughness suitable for semiconductor device fabrication by ArF excimer laser exposure)

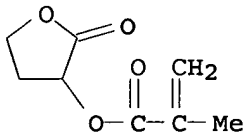
RN 195000-67-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl

ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

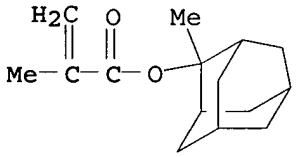
CM 1

CRN 195000-66-9
CMF C8 H10 O4



CM 2

CRN 177080-67-0
CMF C15 H22 O2



IC ICM G03F007-039
ICS C08K005-00; C08K005-04; C08K005-17; C08L101-12; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38, 76

ST pos working chem **amplification photoresist** compn semiconductor device fabrication

IT Positive **photoresists**
Semiconductor device fabrication
(pos.-working chemical **amplification photoresist** composition exhibiting improved line edge roughness suitable for semiconductor device fabrication by ArF excimer laser exposure)

IT Polysiloxanes, uses
(surfactant; pos.-working chemical **amplification photoresist** composition exhibiting improved line edge roughness suitable for semiconductor device fabrication by ArF excimer laser exposure)

IT 100-97-0, Hexamethylene tetramine, uses 3001-72-7, 1.5-Diazobicyclo[4.3.0]-5-nonene 6674-22-2
(acid trapping agent; pos.-working chemical **amplification photoresist** composition exhibiting improved line edge roughness suitable for semiconductor device fabrication by ArF excimer laser exposure)

IT 1886-74-4, Bis(phenylsulfonyl) diazomethane 66003-78-9, Triphenylsulfonium triflate 144317-44-2, Triphenylsulfonium nonafluorobutanesulfonate
(photoacid generator; pos.-working chemical **amplification photoresist** composition exhibiting improved line edge

roughness suitable for semiconductor device fabrication by ArF excimer laser exposure)

IT 122752-67-4P, tert-Butyl cholate **195000-67-0P** 249562-07-0P, Maleic anhydride-2-methyl-2-adamantyl methacrylate-2-norbornene copolymer 258879-87-7P, 2-Methyl-2-adamantyl methacrylate-3-hydroxy-1-adamantyl methacrylate-α-methacryloxy-γ-butyrolactone copolymer 260448-02-0P, tert-Butyl acrylate-maleic anhydride-norbornene copolymer 301525-10-0P
(pos.-working chemical **amplification photoresist** composition exhibiting improved line edge roughness suitable for semiconductor device fabrication by ArF excimer laser exposure)

IT 76-93-7, uses 119-58-4 467-69-6 510-13-4 405226-14-4
(pos.-working chemical **amplification photoresist** composition exhibiting improved line edge roughness suitable for semiconductor device fabrication by ArF excimer laser exposure)

IT 137462-24-9, Megafac F 176 216679-67-3, Megafac R 08
(surfactant; pos.-working chemical **amplification photoresist** composition exhibiting improved line edge roughness suitable for semiconductor device fabrication by ArF excimer laser exposure)

L31 ANSWER 16 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:747864 HCAPLUS
DOCUMENT NUMBER: 135:310923
TITLE: Novel fluoropolymer having acid-reactive group and chemical **amplification** type photoresist composition containing the same
INVENTOR(S): Araki, Takayuki; Koh, Meiten; Tanaka, Yoshito; Ishikawa, Takuji; Aoyama, Hirokazu; Shimizu, Tetsuo
PATENT ASSIGNEE(S): Daikin Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 363 pp.
CODEN: PIXXD2
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001074916	A1	20011011	WO 2001-JP2897	2001 0403

<--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2001044719	A5	20011015	AU 2001-44719	2001 0403

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EP 1275666	A1	20030115	EP 2001-917810	2001 0403 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
TW 588220	B	20040521	TW 2001-90107955	2001 0403 <--
US 2003152864	A1	20030814	US 2002-262893	2002 1003 <--
US 6908724	B2	20050621		
US 2005287471	A1	20051229	US 2005-33954	2005 0113 <--

PRIORITY APPLN. INFO.:	JP 2000-102799	A	2000 0404 <--
	JP 2000-177494	A	2000 0613 <--
	JP 2001-61896	A	2001 0306 <--
	WO 2001-JP2897	W	2001 0403 <--
	US 2002-262893	A1	2002 1003 <--

AB A novel fluoropolymer having acid-reactive groups which highly transmits energy rays (radiation) in the vacuum UV region (157 nm); and a fluoropolymer base material which contains the fluoropolymer and is suitable for use in a photoresist. The fluoropolymer has a segment represented by the formula -(M1)-(M2)-(A)- (wherein M1 is a structural unit having a functional group which is eliminated or decomposed with an acid; M2 is a structural unit derived from a fluoroacrylate; and A is a structural unit derived from other copolymerizable monomer), comprises 1 to 99 mol the structural unit (M1), 1 to 99 mol the structural unit (M2), and 0 to 98 mol the structural unit (A1), provided that (M1)/(M2) is from 1/99 to 99/1 by mole, and has a number-average mol. weight of 1,000 to 1,000,000. The fluoropolymer base material contains a fluoropolymer having acid-reactive groups, such as the fluoropolymer described above, and is suitable for use in a photoresist.

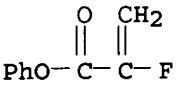
IT **74883-30-0P 119989-02-5P**, Perfluorophenyl α-fluoroacrylate homopolymer **365568-25-8P**, tert-Butyl α-fluoroacrylate-tert-perfluorobutyl acrylate copolymer **365568-52-1P 365568-53-2P**
(preparation and use in chemical **amplification** type

photoresists)

RN 74883-30-0 HCAPLUS
CN 2-Propenoic acid, 2-fluoro-, phenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

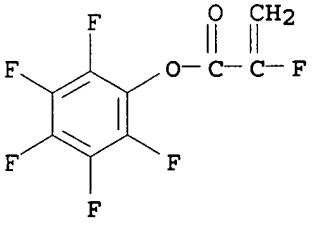
CRN 46115-40-6
CMF C9 H7 F O2



RN 119989-02-5 HCAPLUS
CN 2-Propenoic acid, 2-fluoro-, pentafluorophenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

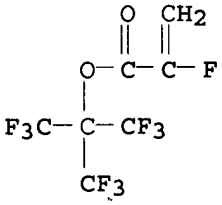
CRN 114589-63-8
CMF C9 H2 F6 O2



RN 365568-25-8 HCAPLUS
CN 2-Propenoic acid, 2-fluoro-, 1,1-dimethylethyl ester, polymer with 2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethyl 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

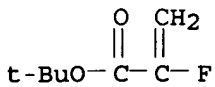
CRN 365568-24-7
CMF C7 H2 F10 O2



CM 2

CRN 85345-86-4

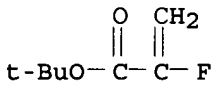
CMF C7 H11 F O2



RN 365568-52-1 HCAPLUS
CN 2-Propenoic acid, 2-fluoro-, 1,1-dimethylethyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-1-decene (9CI) (CA INDEX NAME)

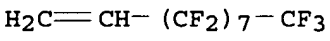
CM 1

CRN 85345-86-4
CMF C7 H11 F O2



CM 2

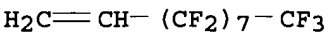
CRN 21652-58-4
CMF C10 H3 F17



RN 365568-53-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-1-decene (9CI) (CA INDEX NAME)

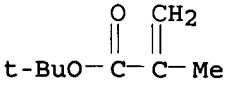
CM 1

CRN 21652-58-4
CMF C10 H3 F17



CM 2

CRN 585-07-9
CMF C8 H14 O2



IC ICM C08F020-22
ICS C08F016-24; C08F014-18; C08F030-08; C08F032-00; G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35
ST fluoropolymer chem **amplification photoresist**; acid reactive fluoropolymer photoresist
IT **Photoresists**
(fluoropolymers having acid-reactive groups as chemical **amplification** type)
IT Fluoropolymers, preparation
(preparation and use in chemical **amplification** type **photoresists**)
IT 28572-02-3P **74883-30-0P 119989-02-5P**, Perfluorophenyl α-fluoroacrylate homopolymer 130139-33-2P 174082-94-1P 262617-13-0P 342005-62-3P **365568-25-8P**, tert-Butyl α-fluoroacrylate-tert-perfluorobutyl acrylate copolymer 365568-27-0DP, ethoxyethylated 365568-27-0P, Perfluoro-(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxa-8-nonenol homopolymer 365568-29-2P 365568-31-6P 365568-33-8P 365568-34-9DP, ethoxyethylated 365568-34-9P 365568-36-1P 365568-37-2P 365568-38-3P 365568-40-7P 365568-41-8P 365568-42-9P 365568-44-1P 365568-45-2P, cyclopentene-tert-butyl α-fluoroacrylate-TFE copolymer 365568-46-3P 365568-47-4P 365568-48-5P 365568-49-6P, Allyl alcohol-tert-butyl methacrylate-tetrafluoroethylene copolymer 365568-50-9P 365568-51-0P **365568-52-1P** **365568-53-2P** 365568-54-3P, 3-tert-Butoxycarbonylcyclopentene-tetrafluoroethylene copolymer 365568-56-5P 365568-57-6P 365568-58-7P, tert-Butyl α-fluoroacrylate-2,3-dihydrofuran-tetrafluoroethylene copolymer 365568-59-8P, tert-Butyl methacrylate-2,3-dihydrofuran-tetrafluoroethylene copolymer 365568-60-1P 365568-61-2P 365568-62-3P 365568-63-4P 365568-64-5P
(preparation and use in chemical **amplification** type **photoresists**)
IT 46115-40-6P 85345-86-4P 105935-24-8P 114589-63-8P 251350-77-3P 342005-61-2P 365568-30-5P 365568-32-7P 365568-39-4P 365568-43-0P
(synthesis and polymerization in preparation of fluoropolymers for **photoresist**)
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 17 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:643383 HCAPLUS
DOCUMENT NUMBER: 135:203015
TITLE: Novel polymers, chemical **amplification** **resist** compositions and patterning process
INVENTOR(S): Hatakeyama, Jun; Watanabe, Jun; Harada, Yuji
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 23 pp.
CODEN: USXXCO
DOCUMENT TYPE: **Patent**
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001018162	A1	20010830	US 2001-783321	2001 0215 <--
US 6835524	B2	20041228		
JP 2001302728	A2	20011031	JP 2001-30542	2001 0207 <--
PRIORITY APPLN. INFO.:			JP 2000-37396 A	2000 0216 <--

AB The polymers comprises recurring units of an acrylic derivative of fluorinated backbone [CR1R2CR3(C(:O)OR4)] (R1-3 = H, F, C1-20 alkyl or fluorinated C1-20 alkyl, at least one of R1-3 contains fluorine; and R4 = hydrophilic group). Using the polymers, chemical **amplification** pos. resist compns. featuring low absorption of F2 excimer laser light are obtained.

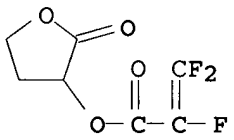
IT **357294-03-2P 357294-05-4P 357294-07-6P 357294-09-8P 357294-10-1P 357294-13-4P 357294-15-6P**
(chemical **amplification resist** compns. containing)

RN 357294-03-2 HCAPLUS

CN 2-Propenoic acid, 2,3,3-trifluoro-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2,3,3-trifluoro-2-propenoate (9CI) (CA INDEX NAME)

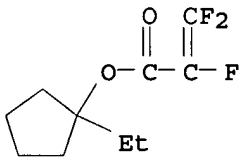
CM 1

CRN 355138-83-9
CMF C7 H5 F3 O4



CM 2

CRN 351492-85-8
CMF C10 H13 F3 O2

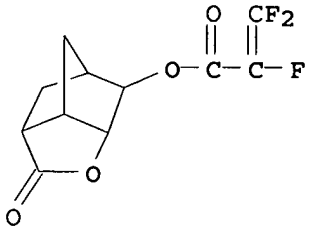


RN 357294-05-4 HCAPLUS

CN 2-Propenoic acid, 2,3,3-trifluoro-, 1-ethylcyclopentyl ester, polymer with hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2,3,3-trifluoro-2-propenoate (9CI) (CA INDEX NAME)

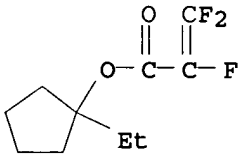
CM 1

CRN 357294-04-3
CMF C11 H9 F3 O4



CM 2

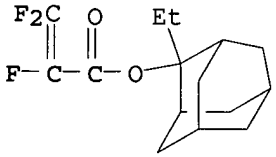
CRN 351492-85-8
CMF C10 H13 F3 O2



RN 357294-07-6 HCAPLUS
CN 2-Propenoic acid, 2,3,3-trifluoro-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2,3,3-trifluoro-2-propenoate (9CI) (CA INDEX NAME)

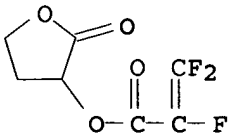
CM 1

CRN 357294-06-5
CMF C15 H19 F3 O2



CM 2

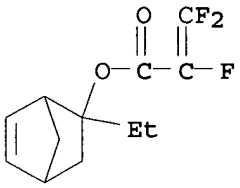
CRN 355138-83-9
CMF C7 H5 F3 O4



RN 357294-09-8 HCAPLUS
CN 2-Propenoic acid, 2,3,3-trifluoro-, 2-ethylbicyclo[2.2.1]hept-5-en-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2,3,3-trifluoro-2-propenoate (9CI) (CA INDEX NAME)

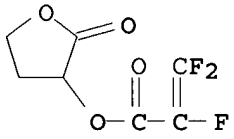
CM 1

CRN 357294-08-7
CMF C12 H13 F3 O2



CM 2

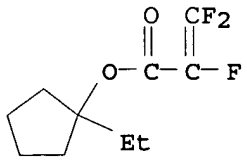
CRN 355138-83-9
CMF C7 H5 F3 O4



RN 357294-10-1 HCAPLUS
CN 2-Propenoic acid, 2,3,3-trifluoro-, ethyl ester, polymer with 1-ethylcyclopentyl 2,3,3-trifluoro-2-propenoate (9CI) (CA INDEX NAME)

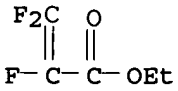
CM 1

CRN 351492-85-8
CMF C10 H13 F3 O2



CM 2

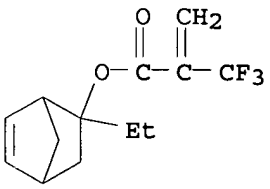
CRN 392-68-7
CMF C5 H5 F3 O2



RN 357294-13-4 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-ethylbicyclo[2.2.1]hept-5-en-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

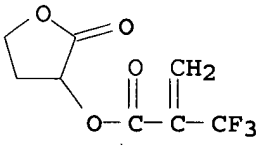
CM 1

CRN 357294-12-3
CMF C13 H15 F3 O2



CM 2

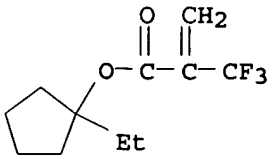
CRN 357294-11-2
CMF C8 H7 F3 O4



RN 357294-15-6 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, ethyl ester, polymer with 1-ethylcyclopentyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

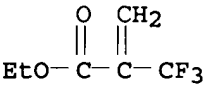
CM 1

CRN 357294-14-5
CMF C11 H15 F3 O2



CM 2

CRN 87769-68-4
CMF C6 H7 F3 O2



IC ICM G03C001-00
ICS G03F007-00; G03C001-73; C08G061-00; G03F007-40
INCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38
IT Positive **photoresists**
(fluorinated acrylic derivative chemical **amplification resist** compns. and patterning process)
IT **357294-03-2P 357294-05-4P 357294-07-6P**
357294-09-8P 357294-10-1P 357294-13-4P
357294-15-6P
(chemical **amplification resist** compns. containing)
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 18 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:632160 HCAPLUS
DOCUMENT NUMBER: 135:203007
TITLE: Radiation-sensitive resist composition containing abietic acid derivative
INVENTOR(S): Doki, Katsuji; Kajita, Toru; Shimokawa, Tsutomu
PATENT ASSIGNEE(S): JSR Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001235863	A2	20010831	JP 2000-44784	2000 0222

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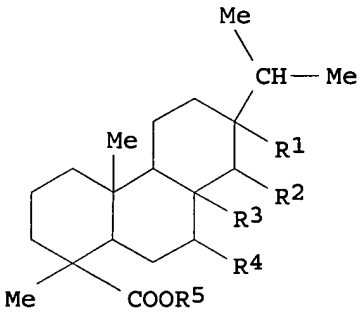
PRIORITY APPLN. INFO.: JP 2000-44784
2000
0222
<--

OTHER SOURCE(S): MARPAT 135:203007
GI



I

AB The composition comprises (A) a resin with an acid decomposable group insol. or slightly soluble in alkali and becoming soluble by the decomposition of the acid-decomposable group, (B) radiation-sensitive acid generator, and (C) an abietic acid derivative I (R1-4 = H, OH, C1-4 linear or branched alkyl, C1-4 linear or branched alkoxyl; R5 = H, (un)substituted C1-20 alkyl, CH2CO2R6; R6 = C1-18 alkyl). The composition is useful as chemical **amplification resist**, shows good dry etching resistance, high sensitivity, and gives high resolution patterns with good profile.

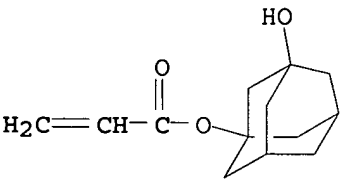
IT **355597-33-0P**, tert-Butyl acrylate-1-(3-hydroxyadamantyl) acrylate copolymer
(radiation-sensitive **resist** composition containing resin having acid-decomposable group, acid generator, and abietic acid derivative)

RN 355597-33-0 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl 2-propenoate (9CI) (CA INDEX NAME)

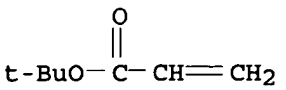
CM 1

CRN 216581-76-9
CMF C13 H18 O3



CM 2

CRN 1663-39-4
CMF C7 H12 O2



IC ICM G03F007-039
ICS C08F002-46; G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
IT **Resists**
(radiation-sensitive; radiation-sensitive **resist** composition containing resin having acid-decomposable group, acid generator, and abietic acid derivative)
IT 144317-44-2, Triphenylsulfonium nonafluorobutanesulfonate
(acid generator; radiation-sensitive **resist** composition containing resin having acid-decomposable group, acid generator, and abietic acid derivative)
IT 355597-16-9P 355597-26-1P **355597-33-0P**, tert-Butyl acrylate-1-(3-hydroxyadamantyl) acrylate copolymer
(radiation-sensitive **resist** composition containing resin having acid-decomposable group, acid generator, and abietic acid derivative)
IT 194999-85-4, Bis(4-tert-butylphenyl)iodonium nonafluorobutanesulfonate 253180-12-0 357186-99-3
(radiation-sensitive **resist** composition containing resin having acid-decomposable group, acid generator, and abietic acid derivative)

L31 ANSWER 19 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:632159 HCAPLUS
DOCUMENT NUMBER: 135:203006
TITLE: Radiation-sensitive resin composition containing alicyclic compound
INVENTOR(S): Doki, Katsuji; Kajita, Toru; Shimokawa, Tsutomu
PATENT ASSIGNEE(S): JSR Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001235862	A2	20010831	JP 2000-44179	2000 0222

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PRIORITY APPLN. INFO.: JP 2000-44179 2000 0222

<--

OTHER SOURCE(S): MARPAT 135:203006

AB The composition comprises (A) a resin with an acid decomposable group insol. or slightly soluble in alkali and becoming soluble by the decomposition of the acid-decomposable group, (B) radiation-sensitive acid generator, and (C) Z(OCOC2H4CO2CH2CO2CMe3)n (Z = n-valent hydrocarbon with alicyclic group having total C no 4-20 ; n = 1-4). The composition is useful as chemical **amplification resist** and gives high resolution clear patterns.

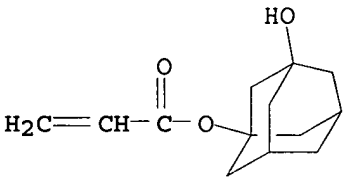
IT **355597-33-0P**
(radiation-sensitive **resist** composition containing resin having acid-decomposable group, acid generator, and alicyclic compound)

RN 355597-33-0 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl 2-propenoate (9CI) (CA INDEX NAME)

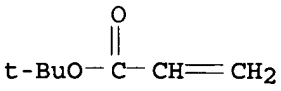
CM 1

CRN 216581-76-9
CMF C13 H18 O3



CM 2

CRN 1663-39-4
CMF C7 H12 O2



IC ICM G03F007-039
ICS C08F220-06; C08F220-10; C08F222-06; C08F232-08; C08K005-103; C08L033-02; C08L033-04; C08L035-00; C08L045-00; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38

IT **Resists**
(radiation-sensitive; radiation-sensitive **resist** composition containing resin having acid-decomposable group, acid generator, and alicyclic compound)

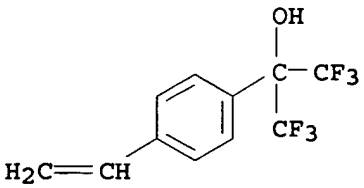
IT 144317-44-2, Triphenylsulfonium nonafluorobutanesulfonate
(acid generator; radiation-sensitive **resist** composition containing resin having acid-decomposable group, acid generator, and alicyclic compound)

IT 355597-16-9P 355597-26-1P **355597-33-0P**
(radiation-sensitive **resist** composition containing resin having acid-decomposable group, acid generator, and alicyclic compound)
IT 194999-85-4, Bis(4-tert-butylphenyl)iodonium nonafluorobutanesulfonate 231296-42-7 357186-92-6
(radiation-sensitive **resist** composition containing resin having acid-decomposable group, acid generator, and alicyclic compound)

L31 ANSWER 20 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:621450 HCAPLUS
DOCUMENT NUMBER: 135:350410
TITLE: Novel fluoropolymers for use in 157 nm lithography
AUTHOR(S): Ito, H.; Wallraff, G. M.; Fender, N.; Brock, P. J.; Larson, C. E.; Truong, H. D.; Breyta, G.; Miller, D. C.; Sherwood, M. H.; Allen, R. D.
CORPORATE SOURCE: IBM Almaden Research Center, San Jose, CA, 95120, USA
SOURCE: Journal of Photopolymer Science and Technology (2001), 14(4), 583-594
CODEN: JSTEEW; ISSN: 0914-9244
PUBLISHER: Technical Association of Photopolymers, Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Unexpectedly good UV transmittance at 157 nm of poly(norbornene sulfone) bearing a pendant hexafluoroisopropanol functionality has prompted the authors to employ this fluoroalc. as an acid group for the design of chemical **amplification resists** for use in 157 nm lithog. The backbone structures to which the hexafluoroalc. group is attached are polynorbornene and polystyrene. Furthermore, the authors discovery that poly(Me α-trifluoromethylacrylate) is adequately transparent at 157 nm has led the authors to incorporate the α-trifluoromethylacrylic unit in the polymer backbone by radical copolymn. with styrenes and norbornenes. Thus, four platforms are currently available to the authors in preparation of 157 nm resist polymers; (1) all-acrylic, (2) all-norbornene, (3) acrylic-norbornene, and (4) acrylic-styrenic systems.
IT **370866-15-2P**, p-(Hexafluoro-2-hydroxypropyl)styrene-tert-butyl methacrylate copolymer
(fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)
RN 370866-15-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 4-ethenyl-α,α-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

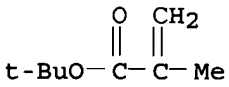
CM 1

CRN 2386-82-5
CMF C11 H8 F6 O



CM 2

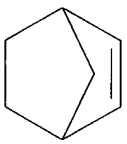
CRN 585-07-9
CMF C8 H14 O2



IT **370866-19-6P 370866-20-9P 370866-24-3P**
370866-36-7P 370866-39-0P 370866-41-4P
370866-44-7P
(synthesis and properties and lithog. evaluation of fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)
RN 370866-19-6 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, polymer with bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

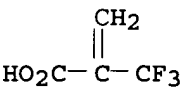
CM 1

CRN 498-66-8
CMF C7 H10



CM 2

CRN 381-98-6
CMF C4 H3 F3 O2

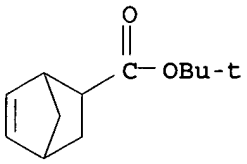


RN 370866-20-9 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 2-(trifluoromethyl)-2-propenoic acid (9CI)

(CA INDEX NAME)

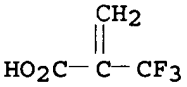
CM 1

CRN 154970-45-3
CMF C12 H18 O2



CM 2

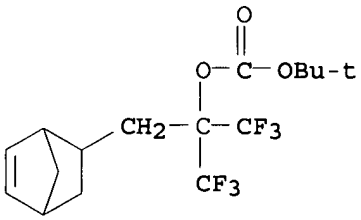
CRN 381-98-6
CMF C4 H3 F3 O2



RN 370866-24-3 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, methyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

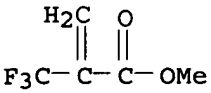
CM 1

CRN 196314-63-3
CMF C16 H20 F6 O3



CM 2

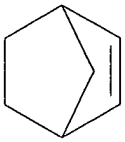
CRN 382-90-1
CMF C5 H5 F3 O2



RN 370866-36-7 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, methyl ester, polymer with bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

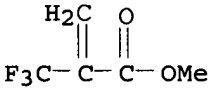
CM 1

CRN 498-66-8
CMF C7 H10



CM 2

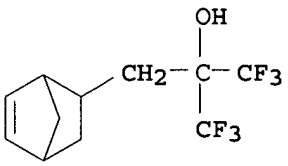
CRN 382-90-1
CMF C5 H5 F3 O2



RN 370866-39-0 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with α,α-bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

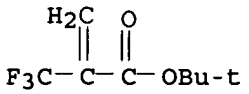
CM 1

CRN 196314-61-1
CMF C11 H12 F6 O



CM 2

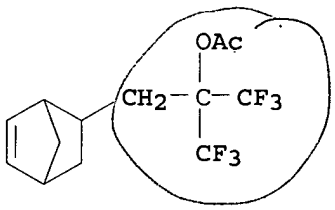
CRN 105935-24-8
CMF C8 H11 F3 O2



RN 370866-41-4 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl acetate (9CI) (CA INDEX NAME)

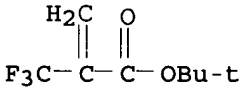
CM 1

CRN 370866-40-3
CMF C13 H14 F6 O2



CM 2

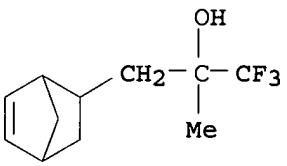
CRN 105935-24-8
CMF C8 H11 F3 O2



RN 370866-44-7 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, methyl ester, polymer with α-methyl-α-(trifluoromethyl)bicyclo[2.2.1]hept-2-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

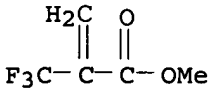
CRN 370866-43-6
CMF C11 H15 F3 O



CM 2

CRN 382-90-1

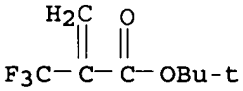
CMF C5 H5 F3 O2



IT **370866-13-0P**, p-(Hexafluoro-2-hydroxypropyl)styrene-tert-butyl α-trifluoromethylacrylate copolymer
(synthesis and properties and lithog. evaluation of fluoropolymers for **photoresist** application for 157 nm exposure lithog.)
RN 370866-13-0 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 4-ethenyl-α,α-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

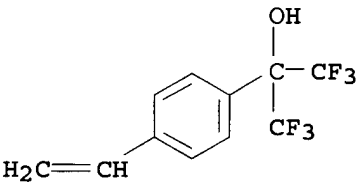
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

CRN 2386-82-5
CMF C11 H8 F6 O



CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 36
IT **Photoresists**
(chemical amplified; synthesis and properties and lithog. evaluation of fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)
IT Dissolution rate
(lithog. evaluation of fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)
IT Polymerization
Polymerization kinetics
(radical; synthesis and properties and lithog. evaluation of

fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)

IT Fluoropolymers, properties
(synthesis and properties and lithog. evaluation of fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)

IT 75-59-2, Tetramethylammonium hydroxide
(developer; lithog. evaluation of fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)

IT **370866-15-2P**, p-(Hexafluoro-2-hydroxypropyl)styrene-tert-butyl methacrylate copolymer
(fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)

IT 213740-80-8, Di-(4-tert-butylphenyl)iodonium perfluorooctanesulfonate
(photoacid generator; lithog. evaluation of fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)

IT 78-67-1, AIBN
(synthesis and properties and lithog. evaluation of fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)

IT 370866-17-4P **370866-19-6P** **370866-20-9P**
370866-22-1P **370866-24-3P** 370866-28-7P 370866-33-4P
370866-36-7P **370866-39-0P** **370866-41-4P**
370866-44-7P 370866-47-0P 370866-48-1P
(synthesis and properties and lithog. evaluation of fluoropolymers based on α-trifluoromethylacrylate copolymers for vacuum UV **photoresist** applications)

IT 2386-82-5, p-(Hexafluoro-2-hydroxypropyl)styrene 105935-24-8, tert-Butyl α-trifluoromethylacrylate
(synthesis and properties and lithog. evaluation of fluoropolymers for **photoresist** application for 157 nm exposure lithog.)

IT **370866-13-0P**, p-(Hexafluoro-2-hydroxypropyl)styrene-tert-butyl α-trifluoromethylacrylate copolymer
(synthesis and properties and lithog. evaluation of fluoropolymers for **photoresist** application for 157 nm exposure lithog.)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 21 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:72419 HCAPLUS
DOCUMENT NUMBER: 134:139218
TITLE: Chemically amplified resist composition and resist pattern formation using same
INVENTOR(S): Fujiwara, Tadayuki; Wakisaka, Yukiya
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2001027804 A2 20010130 JP 1999-199095
1999
0713
<--

PRIORITY APPLN. INFO.: JP 1999-199095
1999
0713
<--

AB The title resist composition contains a resin which becomes soluble in aqueous alkali solns., a photoacid generator, and a blocked polyisocyanate compound in which the isocyanate groups of the diisocyanates or their isocyanurate forms are blocked with blocking agents. The resist is irradiated with actinic ray such as UV, deep UV, electron beam, etc. and/or heat-treated using far IR rays or heat source to form resist patterns. The composition useful in deep UV excimer and electron beam lithog. shows improved dry etch resistance.

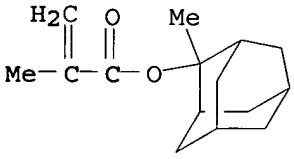
IT **195000-69-2P**, β-Methacryloyloxy-γ-butyrolactone-2-methacryloyloxy-2-methyladamantane copolymer
(chemical amplified **resist** composition containing alkali-soluble resin, photoacid generator, and blocked polyisocyanate)

RN 195000-69-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

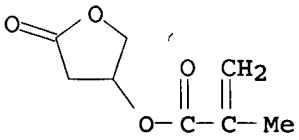
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

CRN 130224-95-2
CMF C8 H10 O4



IC ICM G03F007-039
ICS C08G018-80; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38

ST chem **amplification resist** blocked polyisocyanate; alkali soluble resin resist; photoacid generator resist

IT **Resists**
(radiation-sensitive; chemical amplified **resist** composition containing alkali-soluble resin, photoacid generator, and blocked polyisocyanate)

IT 96-29-7D, Methyl ethyl ketoxime, reaction products with hexamethylene diisocyanate 822-06-0D, 1,6-Hexamethylene diisocyanate, reaction products with Me Et ketoxime 109190-12-7, Coronate 2507 128769-58-4, Coronate 2515
(chemical amplified **resist** composition containing alkali-soluble resin, photoacid generator, and blocked polyisocyanate)

IT 123589-22-0P, p-tert-Butoxystyrene-p-hydroxystyrene copolymer **195000-69-2P**, β-Methacryloyloxy-γ-butyrolactone-2-methacryloyloxy-2-methyladamantane copolymer
(chemical amplified **resist** composition containing alkali-soluble resin, photoacid generator, and blocked polyisocyanate)

IT 66003-78-9, Triphenylsulfonium triflate
(chemical amplified **resist** composition containing alkali-soluble resin, photoacid generator, and blocked polyisocyanate)

L31 ANSWER 22 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:68263 HCAPLUS
DOCUMENT NUMBER: 134:139214
TITLE: Chemically amplified resist composition and resist pattern formation using same
INVENTOR(S): Fujiwara, Tadayuki; Wakisaka, Yukiya
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001027805	A2	20010130	JP 1999-199096 <--	19990713

PRIORITY APPLN. INFO.: JP 1999-199096 <-- 19990713

AB The title resist composition contains a resin which becomes soluble in aqueous alkali solns., a photoacid generator, and polyfunctional (meth)acrylates. The resist is irradiated with actinic ray such as UV, deep UV, electron beam, etc. and/or heat-treated using far IR rays or heat source to form resist patterns. The composition useful in deep UV excimer and electron beam lithog. shows improved dry etch resistance.

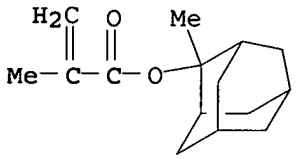
IT **195000-69-2P**, β-Methacryloyloxy-γ-butyrolactone-2-methacryloyloxy-2-methyladamantane copolymer
(chemical amplified **resist** composition containing polyfunctional acrylate)

RN 195000-69-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl

ester, polymer with tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

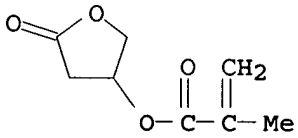
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

CRN 130224-95-2
CMF C8 H10 O4



IC ICM G03F007-039
ICS G03F007-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
ST chem **amplification resist** polyfunctional acrylate
IT **Resists**
(chemical amplified **resist** composition containing polyfunctional acrylate)
IT 3290-92-4, Trimethylolpropane trimethacrylate 82200-31-5, Dipentaerythritol pentamethacrylate
(chemical amplified **resist** composition containing polyfunctional acrylate)
IT 123589-22-0P, p-tert-Butoxystyrene-p-hydroxystyrene copolymer **195000-69-2P**, β-Methacryloyloxy-γ-butyrolactone-2-methacryloyloxy-2-methyladamantane copolymer
(chemical amplified **resist** composition containing polyfunctional acrylate)
IT 66003-78-9, Triphenylsulfonium triflate
(chemical amplified **resist** composition containing polyfunctional acrylate)

L31 ANSWER 23 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:67474 HCAPLUS
DOCUMENT NUMBER: 134:139212
TITLE: Chemically amplified resist composition and resist pattern formation using same
INVENTOR(S): Fujiwara, Tadayuki; Wakisaka, Yukiya

PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001027806	A2	20010130	JP 1999-199097 <--	1999 0713

PRIORITY APPLN. INFO.: JP 1999-199097 <-- 1999 0713

AB The title resist composition contains a resin which becomes soluble in aqueous alkali solns., a photoacid generator, and a polyfunctional epoxy compound and/or a polyfunctional vinyl ether compound The resist is irradiated with actinic ray such as UV, deep UV, electron beam, etc. and/or heat-treated using far IR rays or heat source to form resist patterns. The composition useful in deep UV excimer and electron beam lithog. shows improved dry etch resistance.

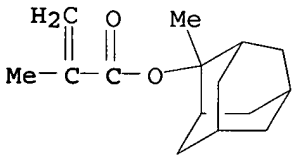
IT **195000-69-2P**, β-Methacryloyloxy-γ-butyrolactone-2-methacryloyloxy-2-methyladamantane copolymer
(chemical amplified **resist** composition containing epoxy compound and/or vinyl ether compound)

RN 195000-69-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

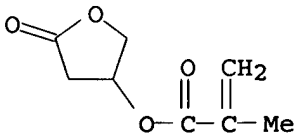
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

CRN 130224-95-2
CMF C8 H10 O4



IC ICM G03F007-039
ICS G03F007-032; G03F007-40; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
ST chem **amplification resist** vinyl ether; epoxy compd chem **amplification resist**
IT **Resists**
(chemical amplified **resist** composition containing epoxy compound and/or vinyl ether compound)
IT 2386-87-0, 3,4-Epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate 130668-21-2, Cyclohexanedimethanol divinyl ether
(chemical amplified **resist** composition containing epoxy compound and/or vinyl ether compound)
IT 123589-22-0P, p-tert-Butoxystyrene-p-hydroxystyrene copolymer **195000-69-2P**, β-Methacryloyloxy-γ-butyrolactone-2-methacryloyloxy-2-methyladamantane copolymer
(chemical amplified **resist** composition containing epoxy compound and/or vinyl ether compound)
IT 66003-78-9, Triphenylsulfonium triflate
(chemical amplified **resist** composition containing epoxy compound and/or vinyl ether compound)

L31 ANSWER 24 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:50933 HCAPLUS
DOCUMENT NUMBER: 134:108010
TITLE: Chemically amplified resist composition
INVENTOR(S): Fujiwara, Tadayuki; Wakisaka, Yukiya; Tooyama, Masayuki
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001004706	A1	20010118	WO 2000-JP4623	2000 0711
			<--	
W: JP, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1209525	A1	20020529	EP 2000-942481	2000 0711
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,				

MC, PT, IE, FI, CY

TW 527525	B	20030411	TW 2000-89113754	2000 0711 <--
US 6887646	B1	20050503	US 2001-30430	2000 0711 <--
PRIORITY APPLN. INFO.:			JP 1999-198160	A 1999 0712 <--
			JP 1999-199098	A 1999 0713 <--
			JP 1999-199099	A 1999 0713 <--
			JP 1999-230059	A 1999 0816 <--
			WO 2000-JP4623	W 2000 0711 <--

AB A chemical amplified resist composition comprises a resin which can be converted to a resin soluble in an aqueous alkaline solution by an acid, an acid generating agent which is activated by irradiation, and an amine derivative which shows such a basicity as to form a conjugate acid in water at 25 °C and has a medium polarity. The amine derivative acts as a quencher. The presence of the amine derivative allows the resist composition to form a finer resist pattern, and thus the resist composition can be suitably used particularly in a lithog. using ArF excimer laser radiation.

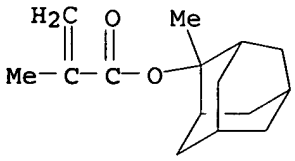
IT **186585-53-5P**, p-Hydroxystyrene-2-Methyl-2-adamantyl methacrylate copolymer **195000-69-2P**, 2-Methyl-2-adamantyl methacrylate-β-Methacryloyloxy-γ-butyrolactone copolymer
(resin in chemical **amplification resist** composition)

RN 186585-53-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

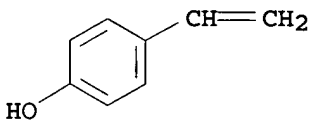
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

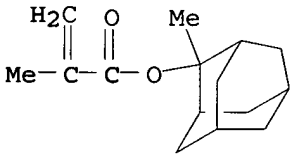
CRN 2628-17-3
CMF C8 H8 O



RN 195000-69-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

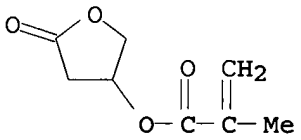
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

CRN 130224-95-2
CMF C8 H10 O4



IC ICM G03F007-039
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST **amplification resist** compn

IT Photolithography
Photoresists
(chemical **amplification resist** composition)
IT 79-16-3, N-Methylacetamide 105-60-2, ε-Caprolactam, uses
120-07-0, N-Phenyldiethanolamine 766-93-8, N-Cyclohexylformamide
2867-47-2, β-Dimethylaminoethyl methacrylate 4513-53-5,
β-Cyanoethyl methacrylate 6837-24-7, 1-Cyclohexyl-2-
pyrrolidinone 13749-61-6, N-Isopropylmethacrylamide
24544-04-5, 2,6-Diisopropylaniline
(amine in chemical **amplification resist** composition)
IT 123589-22-0P, 4-tert-Butoxystyrene-p-hydroxystyrene copolymer
186585-53-5P, p-Hydroxystyrene-2-Methyl-2-adamantyl
methacrylate copolymer **195000-69-2P**,
2-Methyl-2-adamantyl methacrylate-β-Methacryloyloxy-γ-
butyrolactone copolymer
(resin in chemical **amplification resist** composition)
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 25 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:877011 HCAPLUS
DOCUMENT NUMBER: 134:63888
TITLE: Positive-working chemical **amplification photoresist** composition for far-ultraviolet ray exposure
INVENTOR(S): Sato, Kenichiro; Kodama, Kunihiko; Aogo, Toshiaki
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 52 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 2000347408	A2	20001215	JP 1999-158693 <--		19990604
US 6479211	B1	20021112	US 2000-577884 <--		20000525
PRIORITY APPLN. INFO.:			JP 1999-146774 <--	A	19990526
			JP 1999-146775 <--	A	19990526
			JP 1999-150215	A	19990528

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JP 1999-152860 A
1999
0531
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JP 1999-152861 A
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JP 1999-152862 A
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JP 1999-158693 A
1999
0604
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JP 1999-158695 A
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0604
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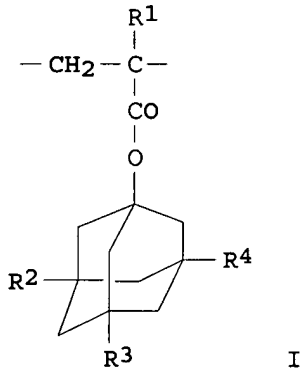
GI



I

AB A pos.-working photoresist containing (A) a compound generating an acid upon irradiation with active ray or radioactive ray, (B) a resin having a repeating unit (I; R1 = H, halo, C1-4 linear or branched alkyl; R2 - R4 = H or OH, provided that at least one of R2 - R4 is OH) and decomposing upon reaction with an acid to increase the solubility in an alkali developer, and (C) a compound generating sulfonic acid is described. This photoresist decreases the development of defects or the formation of scums when using an exposure source of 150 nm wavelength, in particular ≤220 nm, and improves microlithog. (photolithog.) process of LSI and microchips using far-UV ray such as excimer laser beam.

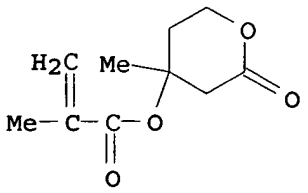
IT **312616-54-9P 312616-55-0P 312616-59-4P 312728-97-5P**
(pos.-working chemical **amplification photoresist** composition for far-UV ray exposure)

RN 312616-54-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

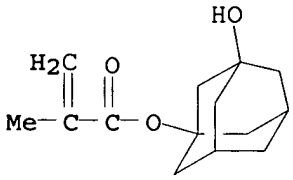
CM 1

CRN 177080-66-9
CMF C10 H14 O4



CM 2

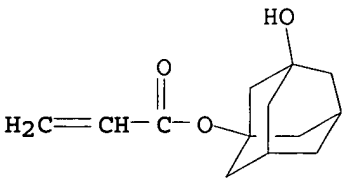
CRN 115372-36-6
CMF C14 H20 O3



RN 312616-55-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl ester, polymer with 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl 2-propenoate (9CI) (CA INDEX NAME)

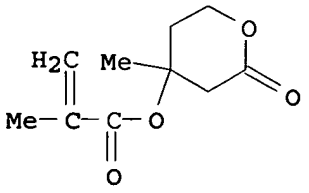
CM 1

CRN 216581-76-9
CMF C13 H18 O3



CM 2

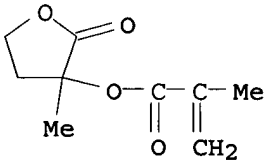
CRN 177080-66-9
CMF C10 H14 O4



RN 312616-59-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl ester, polymer with tetrahydro-3-methyl-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

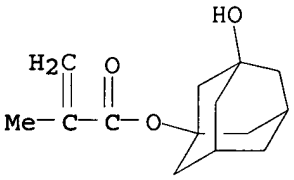
CM 1

CRN 211802-06-1
CMF C9 H12 O4



CM 2

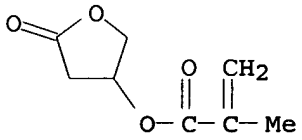
CRN 115372-36-6
CMF C14 H20 O3



RN 312728-97-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl ester, polymer with tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

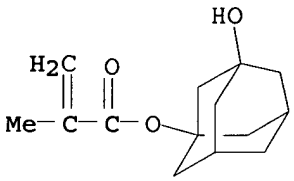
CM 1

CRN 130224-95-2
CMF C8 H10 O4



CM 2

CRN 115372-36-6
CMF C14 H20 O3



IC ICM G03F007-039
ICS C08L033-04; G03F007-004; G03F007-027; G03F007-20; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76
IT Positive **photoresists**
(pos.-working chemical **amplification photoresist** composition for far-UV ray exposure)
IT Acrylic polymers, preparation
(pos.-working chemical **amplification photoresist** composition for far-UV ray exposure)
IT 288303-62-8P 288303-65-1P 288303-68-4P
(acid-generating compound; pos.-working chemical **amplification photoresist** composition for far-UV ray exposure)
IT 93-11-8, 2-Naphthalenesulfonyl chloride 126-81-8, Dimedone 771-98-2, 1-Phenyl-1-cyclohexene 832-53-1, Pentafluorobenzenesulfonyl chloride 1694-31-1, tert-Butyl acetoacetate 2033-24-1, Meldrum's acid 21286-54-4, 10-Camphorsulfonyl chloride
(pos.-working chemical **amplification photoresist** composition for far-UV ray exposure)
IT 39149-65-0P 72875-02-6P
(pos.-working chemical **amplification photoresist** composition for far-UV ray exposure)
IT 258879-89-9P 288303-73-1P 288303-75-3P 288303-77-5P
303154-53-2P 312616-33-4P 312616-36-7P 312616-39-0P
312616-42-5P 312616-45-8P 312616-47-0P 312616-48-1P
312616-49-2P 312616-51-6P 312616-52-7P **312616-54-9P**
312616-55-0P **312616-59-4P** 312620-39-6P
312620-42-1P 312620-52-3P 312620-54-5P 312620-56-7P
312620-58-9P 312728-96-4P **312728-97-5P** 312728-99-7P
312729-01-4P 313708-80-4P 313708-81-5P
(pos.-working chemical **amplification photoresist** composition for far-UV ray exposure)
IT 100-97-0, Hexamethylenetetramine, uses 280-57-9,

1,4-Diazabicyclo[2.2.2]octane 1122-58-3, 4-Dimethylaminopyridine 2305-59-1 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2, 1,8-Diazabicyclo[5.4.0]-7-undecene
(pos.-working chemical **amplification photoresist** composition for far-UV ray exposure)

L31 ANSWER 26 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:317214 HCAPLUS
DOCUMENT NUMBER: 132:341195
TITLE: Chemically amplified photoresist composition
INVENTOR(S): Choi, Sang Joon
PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000137328	A2	20000516	JP 1999-307678 <--	19991028
JP 3501988	B2	20040302		
KR 2000027737	A	20000515	KR 1998-45736 <--	19981029
TW 422940	B	20010221	TW 1999-88100758 <--	19990119
US 6114422	A	20000905	US 1999-313808 <--	19990518
PRIORITY APPLN. INFO.:			KR 1998-45736 A <--	19981029

AB The title resist composition comprises a photosensitive polymer of the formula [CH2CH(C6H4OH-p)]k[CH2CR1(CO2(CH2)xCH(CO2R2)2)]l [I; R1 = H, Me; R2 = tert-Bu, tetrahydropyranyl, 1-alkoxyethyl; x = 1-4; k/(k + l) = 0.5-0.9] and a photoacid generator 1-15 weight% of the polymer. The resist composition comprises a polymer blend of I and [CH2CH(C6H4OH-p)]m[CH2CH(C6H4OR3-p)]n [R3 = tert-BU, tetrahydropyranyl, 1-alkoxyethyl, tert-butoxycarbonyl; m/(m + n) = 0.5-0.9] and a photoacid generator 1-15 weight% of the polymer blend. The composition provides a high contrast pattern showing good thermal characteristics.

IT **268550-94-3DP**, 4-Acetoxystyrene-di-tert-butylmalonylpropyl acrylate copolymer, hydrolyzed
(**photoresist** composition containing acrylic acid ester-hydroxystyrene copolymer and acid generator)

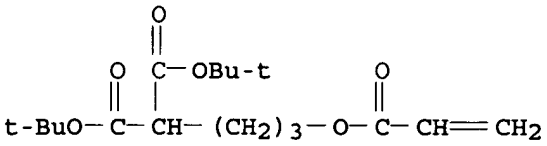
RN 268550-94-3 HCAPLUS

CN Propanedioic acid, [3-[(1-oxo-2-propenyl)oxy]propyl]-, bis(1,1-dimethylethyl) ester, polymer with 4-ethenylphenyl acetate

(9CI) (CA INDEX NAME)

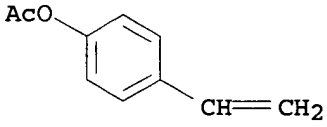
CM 1

CRN 268550-93-2
CMF C17 H28 O6



CM 2

CRN 2628-16-2
CMF C10 H10 O2



IC ICM G03F007-039
ICS C08F008-12; C08F212-14; C08L025-18; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
ST chem **amplification photoresist** hydroxystyrene acrylate copolymer; photoacid generator photoresist; polymer blend polyhydroxystyrene deriv photoresist
IT **Photoresists**
(chemical **amplification**-type **photoresist** containing acrylate-hydroxystyrene copolymer and photoacid generator)
IT Polymer blends
(chemical **amplification**-type **photoresist** containing polymer blend of acrylate-hydroxystyrene copolymer and hydroxystyrene derivative polymer)
IT 102-71-6, uses 111-42-2, Diethanolamine, uses 121-44-8, uses 1116-40-1, Triisobutylamine
(**photoresist** composition containing acrylic acid ester-hydroxystyrene copolymer and acid generator)
IT 109-92-2DP, Ethyl vinyl ether, ethers with polyhydroxystyrene 110-87-2DP, ethers with polyhydroxystyrene 59269-51-1DP, Poly(hydroxystyrene), ethers 155214-68-9P, Poly(hydroxystyrene) tert-butylcarbonate **268550-94-3DP**, 4-Acetoxystyrene-di-tert-butylmalonylpropyl acrylate copolymer, hydrolyzed
(**photoresist** composition containing acrylic acid ester-hydroxystyrene copolymer and acid generator)
IT 34684-40-7, N-Hydroxysuccinimide triflate 66003-78-9, Triphenylsulfonium triflate
(**photoresist** composition containing acrylic acid ester-hydroxystyrene copolymer and acid generator)

L31 ANSWER 27 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:316980 HCAPLUS
DOCUMENT NUMBER: 132:341190
TITLE: Photosensitive polymer for chemically amplified resists and chemically amplified resist composition containing same
INVENTOR(S): Choi, Sang Joon
PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000136219	A2	20000516	JP 1999-307677 <--	19991028
JP 3724994	B2	20051207		
KR 2000027738	A	20000515	KR 1998-45737 <--	19981029
TW 440746	B	20010616	TW 1999-88100759 <--	19990119
US 6294630	B1	20010925	US 1999-372016 <--	19990811
US 2002026022	A1	20020228	US 2001-915670 <--	20010726
US 6515038	B2	20030204		

PRIORITY APPLN. INFO.: KR 1998-45737 A 19981029
US 1999-372016 A3 19990811

AB The title polymer has the general formula [CH2CR1(CO2(CH2)xCH(CO2R2)2)]l[CH2CR3(CO2R4)]m[CH2CR5(C6H4OH-p)]n [R1, R3, R5 = H, Me; R2 = tert-Bu, tetrahydropyranyl, 1-alkoxyethyl; R4 = H, Me, tert-Bu, tetrahydropyranyl, 1-alkoxyethyl; x = 1-4; l/(l + m + n) = 0.1-0.5; m/(l + m + n) = 0.01-0.5; (l + m)/(l + m + n) = 0.1-0.7]. The resist composition contains the polymer and a photoacid generator 1-15 weight% of the polymer. The polymer shows increased solubility difference prior to and after exposure, and hence the resist composition provides high contrast patterns.

IT **267899-95-6DP**, hydrolyzed

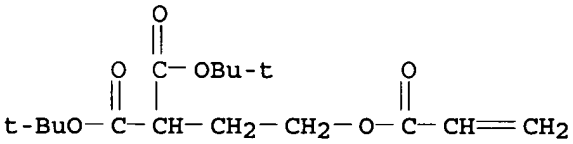
(**photoresist** composition containing acrylic acid ester-hydroxystyrene copolymer and acid generator)

RN 267899-95-6 HCAPLUS

CN Propanedioic acid, [2-[(1-oxo-2-propenyl)oxy]ethyl]-, bis(1,1-dimethylethyl) ester, polymer with 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

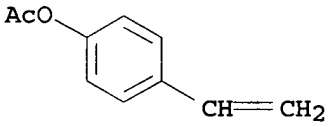
CM 1

CRN 267899-92-3
CMF C16 H26 O6



CM 2

CRN 2628-16-2
CMF C10 H10 O2



IC ICM C08F220-28
ICS C08F008-12; C08L033-00; G03F007-004; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38

ST chem **amplification photoresist**; malonylalkyl acrylate copolymer photoresist; hydroxystyrene acrylate copolymer photoresist; acid generator photoresist

IT **Photoresists**
(**photoresist** composition containing acrylic acid ester-hydroxystyrene copolymer and acid generator)

IT 267899-93-4DP, hydrolyzed 267899-94-5DP, hydrolyzed **267899-95-6DP**, hydrolyzed
(**photoresist** composition containing acrylic acid ester-hydroxystyrene copolymer and acid generator)

IT 66003-78-9, Triphenylsulfonium triflate
(**photoresist** composition containing acrylic acid ester-hydroxystyrene copolymer and acid generator)

L31 ANSWER 28 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:139195 HCAPLUS
DOCUMENT NUMBER: 132:187644
TITLE: Polymer, chemically amplified negative-working resist containing same, and resist pattern formation
INVENTOR(S): Iwasa, Shigeyuki; Maeda, Katsumi; Nakano,

Kaichiro; Hasegawa, Etsuo
PATENT ASSIGNEE(S): NEC Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 35 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000063433	A2	20000229	JP 1998-229154 <--	1998 0813
JP 3003680	B2	20000131		

PRIORITY APPLN. INFO.: JP 1998-229154 1998 0813 <--

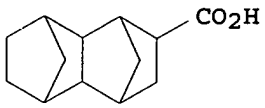
AB The title polymer has the general formula [CH2CR1(CO2R2CO2H)]x[CH2CR5(CONHCH2OR6)]z (I), [CH2CR3(CO2R4OH)]y[CH2CR5(CONHCH2OR6)]z (II) or [CH2CR1(CO2R2CO2H)]x[CH2CR3(CO2R4OH)]y[CH2C R5(CONHCH2OR6)]z (III) (R1, R3, R5 = H or Me; R2, R4 = C7-18 alkylene having a cross-linked cyclic hydrocarbon group; R6 = H or C1-12 alkyl; x + z = 1, 0 < x < 1, and 0 < z < 1 in I; y + z = 1, 0 < y < 1, and 0 < z < 1 in II; x + y + z = 1, 0 < x < 1, 0 < y< 1, and 0 < z < 1 in III) and a weight average mol. weight of 1000-500,000. The title resist comprises the polymer and a photoacid generator and is coated on a substrate, patternwise exposed to light of wavelength 180-220 nm, heat-treated, and developed to form a resist pattern. The polymer shows high transparency toward short wavelength light of ≤220 nm such as ArF excimer laser beams and improved dry etch resistance.

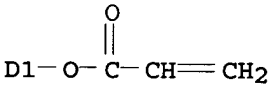
IT **259528-66-0P 259528-67-1P**
(chemical **amplification**-type **photoresist** containing acrylic polymer and photoacid generator)

RN 259528-66-0 HCAPLUS
CN 1,4:5,8-Dimethanonaphthalene-2-carboxylic acid, decahydro-6(or 7)-[(1-oxo-2-propenyl)oxy]-, polymer with N-(methoxymethyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

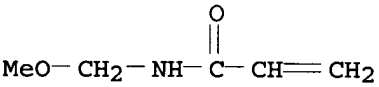
CRN 195398-52-8
CMF C16 H20 O4
CCI IDS





CM 2

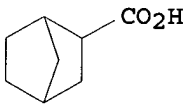
CRN 3644-11-9
CMF C5 H9 N O2

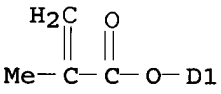


RN 259528-67-1 HCAPLUS
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with N-(methoxymethyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

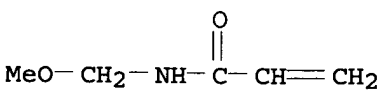
CRN 210641-03-5
CMF C12 H16 O4
CCI IDS





CM 2

CRN 3644-11-9
CMF C5 H9 N O2

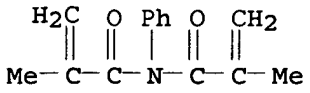


IC ICM C08F020-18
ICS C08F020-28; C08F020-36; C08L033-06; C08L033-26; G03F007-038; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
ST chem **amplification resist** photoacid generator; alicyclic acrylic polymer neg photoresist
IT Negative **photoresists**
(chemical **amplification**-type **photoresist** containing acrylic polymer and photoacid generator)
IT 259528-63-7P 259528-65-9P **259528-66-0P** **259528-67-1P**
(chemical **amplification**-type **photoresist** containing acrylic polymer and photoacid generator)
IT 84563-54-2 171292-12-9
(chemical **amplification**-type **photoresist** containing acrylic polymer and photoacid generator)

L31 ANSWER 29 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:129524 HCAPLUS
DOCUMENT NUMBER: 132:286212
TITLE: Cyclized copolymer of methacrylic anhydride and an application to photoresist with photoacid generator
AUTHOR(S): Takao, Yasuyuki; Miyagawa, Nobukazu; Takahara, Shigeru; Yamaoka, Tsuguo
CORPORATE SOURCE: Department of Information and Image science, Faculty of Engineering, Chiba University, Chiba, 263-8522, Japan
SOURCE: Journal of Photopolymer Science and Technology (1999), 12(5), 769-772
CODEN: JSTEEW; ISSN: 0914-9244
PUBLISHER: Technical Association of Photopolymers, Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The cyclized copolymn. of methacrylic anhydride with N-phenyldimethacrylamide and methacrylonitrile was carried out. The polymer consists of six-membered cyclic acid anhydride and five-membered imide ring. The cyclic acid anhydride was hydrolized by generated acid catalyst from photoacid generator (PAG). The hydrolyzed copolymer is dissolved in an alkaline solution The authors applied this copolymer with PAG to photoresist based on the chemical amplified system and obtained good patterns of pos.-tone image.
IT **263896-39-5P**, Methacrylic anhydride-N-phenyldimethacrylamide copolymer
(cyclized copolymn. of methacrylic anhydride with N-phenyldimethacrylamide in design of **resists** for photolithog. applications)
RN 263896-39-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, anhydride, polymer with 2-methyl-N-(2-methyl-1-oxo-2-propenyl)-N-phenyl-2-propenamide (9CI) (CA INDEX NAME)

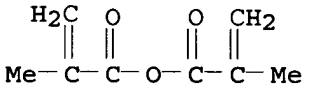
CM 1

CRN 7370-86-7
CMF C14 H15 N O2



CM 2

CRN 760-93-0
CMF C8 H10 O3



CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

IT **Photoresists**
(chemical **amplification**; cyclized copolymer of methacrylic anhydride its acid-induced reaction and its application to **photoresist** with photoacid generator)

IT IR spectra
(cyclized copolymn. of methacrylic anhydride with N-phenyldimethacrylamide in design of **resists** for photolithog. applications)

IT Polymerization
(cyclized; cyclized copolymn. of methacrylic anhydride with N-phenyldimethacrylamide in design of **resists** for photolithog. applications)

IT 263896-37-3P, Methacrylic anhydride-methacrylonitrile-N-phenyldimethacrylamide copolymer
(cyclized copolymer of methacrylic anhydride its acid-induced reaction and its application to chemical **amplification photoresists**)

IT 66003-76-7, Diphenyliodonium trifluoromethanesulfonate
(cyclized copolymer of methacrylic anhydride its acid-induced reaction and its application to chemical **amplification photoresists**)

IT **263896-39-5P**, Methacrylic anhydride-N-phenyldimethacrylamide copolymer
(cyclized copolymn. of methacrylic anhydride with N-phenyldimethacrylamide in design of **resists** for photolithog. applications)

IT 75-59-2, Tetramethylammonium hydroxide
(developer; cyclized copolymer of methacrylic anhydride its acid-induced reaction and its application to chemical **amplification photoresists**)

IT 104-15-4, 4-Toluenesulfonic acid, uses
(thermal reaction of cyclized copolymer of methacrylic anhydride with acid catalyst in relation to its application to **photoresist** with photoacid generator)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 30 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:117258 HCAPLUS
DOCUMENT NUMBER: 132:173395
TITLE: Radiation-sensitive composition for chemically amplified photoresist
INVENTOR(S): Pawlowski, Georg; Okazaki, Hiroshi; Kinoshita, Yoshiaki; Tsugama, Naoko; Hishida, Aritaka; Ma, Xiao-ming; Yamaguchi, Yuko
PATENT ASSIGNEE(S): Clariant International Ltd., Switz.
SOURCE: PCT Int. Appl., 133 pp.
CODEN: PIXXD2
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008525	A1	20000217	WO 1999-JP4304	1999 0809
			<--	
W: CN, JP, KR, SG, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1033624	A1	20000906	EP 1999-935116	1999 0809
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6358665	B1	20020319	US 2000-529371	2000 0703
			<--	

PRIORITY APPLN. INFO.:	JP 1998-225029	A	1998 0807
	<--		
	JP 1999-87036	A	1999 0329
	<--		
	WO 1999-JP4304	W	1999 0809
	<--		

AB A chemical **amplification**-type radiation-sensitive composition comprising a film-forming resin based on a hydroxystyrene in combination with an onium salt precursor capable of generating a fluorinated alkanesulfonic acid as a radiation-sensitive acid-generating agent. This composition is free from the occurrence of corrosion of an apparatus owing to outgassing, the formation of a T-type pattern and the change of line width caused by a delay of processing time, and can be used for achieving a high sensitivity and resolving power and a good and stable pattern formation.

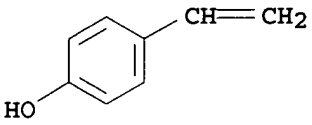
IT **155040-27-0P**, 4-Hydroxystyrene-tert-butyl methacrylate copolymer **174476-25-6DP**, 4-Acetoxystyrene-4-tert-butyl acrylate copolymer, hydrolyzed, reaction products with Et vinyl ether

(radiation-sensitive composition for chemical amplified **photoresist**)

RN 155040-27-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

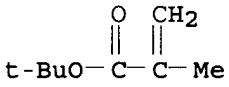
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

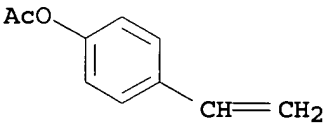
CRN 585-07-9
CMF C8 H14 O2



RN 174476-25-6 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

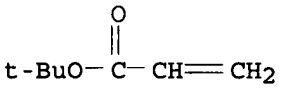
CM 1

CRN 2628-16-2
CMF C10 H10 O2



CM 2

CRN 1663-39-4
CMF C7 H12 O2



IC ICM G03F007-004

ICS G03F007-039; G03F007-038; C07C381-12; C07C309-06
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST radiation sensitive compn chem **amplification resist**
IT **Photoresists**
(radiation-sensitive composition for chemical amplified **photoresist**)
IT Onium compounds
(radiation-sensitive composition for chemical amplified **photoresist**)
IT 258871-80-6P, Tris(4-hydroxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate
(radiation-sensitive composition for chemical amplified **photoresist**)
IT 76-05-1P, preparation 108-90-7P, Chlorobenzene, preparation 109-92-2DP, Ethylvinyl ether, reaction product with functionalized styrene polymer 110-75-8DP, 2-Chloroethylvinyl ether, reaction product with 4-hydroxystyrene homopolymer 536-80-1P, Iodosylbenzene 827-52-1P, Cyclohexylbenzene 2628-17-3P 5292-43-3DP, tert-Butylbromoacetate, reaction product with hydrolyzed 4-tert-Bu polymer 7758-05-6P, Potassium iodate 12124-97-9P, Ammonium bromide 18995-35-2P 24979-70-2DP, 4-Hydroxystyrene homopolymer, reaction product with functionalized vinyl compound 34619-03-9DP, Di-tert-butylcarbonate, reaction product with 4-hydroxystyrene homopolymer 68734-62-3P, Trimethylsilylnonafluorobutanesulfonate 94287-61-3P 129361-29-1P 130100-38-8P 133685-94-6P 135648-85-0P, 4-Hydroxystyrene-4-methoxystyrene copolymer 144317-44-2P, Triphenylsulfonium nonafluorobutanesulfonate **155040-27-0P**, 4-Hydroxystyrene-tert-butyl methacrylate copolymer 158401-89-9P **174476-25-6DP**, 4-Acetoxystyrene-4-tert-butyl acrylate copolymer, hydrolyzed, reaction products with Et vinyl ether 175610-67-0P 176747-00-5P, Diphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 204065-67-8DP, 4-Hydroxystyrene-4-methylstyrene copolymer, reaction product with ethoxy vinyl ether 241806-75-7P, Tris(4-tert-butylphenyl)sulfonium nonafluorobutanesulfonate 258871-76-0P, Tris(4-tert-butylphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-78-2P, Tri(4-t-butoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-81-7P, Tris(4-tert-butoxycarbonylmethoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-83-9P, β-Oxocyclohexyl 2-norbonylmethyl sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-84-0P, Bis(4-cyclohexylphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-85-1P, 4-Methylphenylphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-86-2P, Bis(4-tert-butoxyphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-88-4P, Bis(4-methylphenyl)-4-cyclohexylphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-89-5P, Tris(4-chlorophenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-90-8P, 4-Hydroxy-3,5-dimethylphenyldiphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-91-9P, Di(4-t-butyloxyphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-94-2P, Di(4-tert-butylcarbonyloxymethyloxyphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-95-3P, 4-tert-Butylphenylphenyliodonium 3,3,3,2,1,1-

hexafluoropropanesulfonate 258871-97-5P, 4-Hydroxystyrene-4-tetrahydropyranyloxystyrene-α,ω-triethyleneglycol divinyl ether copolymer 258871-99-7P, Tris(tert-butylcarbonylmethyloxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-01-4P, Bis(4-cyclohexylphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-02-5P, 4-Hydroxystyrene-4-tert-butyloxycarbonyloxystyrene-tert-butyl methacrylate copolymer 258872-05-8P, Diphenyl 4-tert-butylphenylsufonium nonafluorobutanesulfonate 258872-08-1P, Tris(4-butoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-10-5P, Tris(4-tert-butoxycarbonylmethoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-13-8P 258872-14-9P, Bis(4-cyclohexylphenyl)iodonium nonafluorobutylsulfonate 258872-15-0DP, 4-Acetoxystyrene-styrene-tert-butyl methacrylate copolymer, reaction products with hydroxystyrene polymer derivative 258873-04-0P, Bis(4-hydroxyphenyliodonium) 3,3,3,2,1,1-hexafluoropropanesulfonate
(radiation-sensitive composition for chemical amplified **photoresist**)

IT 67-68-5, Dimethyl sulfoxide, reactions 71-43-2, Benzene, reactions 75-75-2, Methanesulfonic acid 107-59-5, tert-Butyl chloroacetate 357-31-3 375-73-5 507-19-7, tert-Butyl bromide 591-50-4, Iodobenzene 945-51-7, Diphenylsulfoxide 3085-42-5, 4,4'-Dichlorophenyl sulfoxide 5292-43-3, tert-Butylbromoacetate 29342-65-2, 2-Bromonorbornane 137455-55-1, Tris(4-tert-butoxyphenyl)sulfonium 170632-59-4, Bis(4-tert-butoxyphenyl)sulfoxide 258872-06-9, Diphenyl 4-tert-butylphenylsufonium bromide 258872-11-6, Tris-4(tert-butoxyphenyl)sulfonium nonafluorobutanesulfonate 263871-53-0
(radiation-sensitive composition for chemical amplified **photoresist**)

IT 216679-67-3, Megafac R 08 258871-96-4, 4-Hydroxystyrene-styrene-tert-butyl methacrylate copolymer
(radiation-sensitive composition for chemical amplified **photoresist**)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 31 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:631478 HCAPLUS
DOCUMENT NUMBER: 131:264778
TITLE: Photoresist composition
INVENTOR(S): Ochiai, Koshiro; Fukui, Nobuhito
PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan
SOURCE: Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DOCUMENT TYPE: **Patent**
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 945764	A2	19990929	EP 1999-106059	1999 0325

				<--
EP 945764	A3	20000419		
EP 945764	B1	20030618		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11271977	A2	19991008	JP 1998-79033	1998 0326
				<--
JP 3546687	B2	20040728		
SG 71202	A1	20000321	SG 1999-1534	1999 0324
				<--
CN 1230704	A	19991006	CN 1999-103239	1999 0326
				<--
US 6258507	B1	20010710	US 1999-276715	1999 0326
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TW 227372	B1	20050201	TW 1999-88104825	1999 0326
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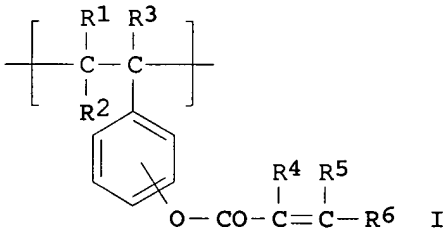
PRIORITY APPLN. INFO.:			JP 1998-79033 A	1998 0326
				<--

GI



I

AB A photoresist composition which is particularly useful as a chemical **amplification** type photoresist is provided, wherein the photoresist composition contains a resin having a structural unit represented by the formula I wherein R1, R2 and R3 each independently represents a hydrogen atom or an alkyl group having 1 to 4 carbon atoms; R4 represents a hydrogen atom, an alkyl group having 1 to 4 carbon atoms, or an alkoxy group having 1 to 4 carbon atoms; R5 represents a hydrogen atom, an alkyl group, or an aryl group, or R4 and R5 join together may form a ring, which may be heterocyclic; and R6 represents a hydrogen atom, an alkyl group having 1 to 4 carbon atoms, an alkoxy group having 1 to 4 carbon atoms, or a hydroxyl group.

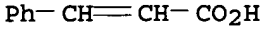
IT **81407-03-6DP**, 1-ethoxyethyl ether
(preparation and use in preparing chemical amplified **photoresists**)

RN 81407-03-6 HCAPLUS

CN Phenol, 4-ethenyl-, homopolymer, 3-phenyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 621-82-9
CMF C9 H8 O2

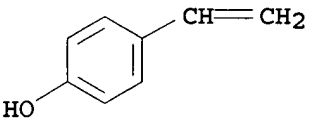


CM 2

CRN 24979-70-2
CMF (C8 H8 O)x
CCI PMS

CM 3

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039
ICS G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST chem **amplification photoresist** polyvinylphenyl acrylate
IT **Photoresists**
(chemical amplified; containing poly(vinylphenyl acrylate) resins)
IT 4455-26-9, Methyldioctylamine 70384-51-9, Tris[2-(2-methoxyethoxy)ethyl]amine 138529-81-4, Bis(cyclohexylsulfonyl)diazomethane
(chemical amplified **photoresists** containing poly(vinylphenyl carboxylate) resins and)
IT **81407-03-6DP**, 1-ethoxyethyl ether 244630-25-9DP, 1-ethoxyethyl ether 244630-26-0DP, 1-ethoxyethyl ether 244630-27-1DP, 1-ethoxyethyl ether 244630-28-2DP, 1-ethoxyethyl ether 244630-29-3DP, 1-ethoxyethyl ether
(preparation and use in preparing chemical amplified **photoresists**)
IT 24979-70-2, Poly(p-vinylphenol)
(reaction in preparing poly(vinylphenyl carboxylate) resins for chemical amplified **photoresists**)
IT 244630-24-8DP, Poly(p-vinylphenol) benzoate, 1-ethoxyethyl ether
(reaction in preparing poly(vinylphenyl carboxylate) resins for chemical amplified **photoresists**)
IT 98-88-4, Benzoyl chloride 100-07-2, 4-Anisoyl chloride 102-92-1, Cinnamoyl chloride 527-69-5, 2-Furoyl chloride 1711-05-3, 3-Anisoyl chloride 28788-62-7, 4-Butylbenzoyl chloride 33863-86-4

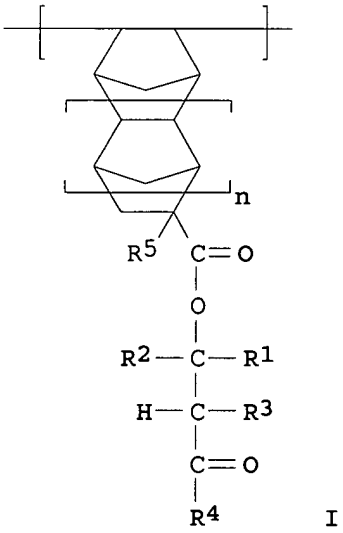
(reaction with poly(vinylphenol) in preparing poly(vinylphenyl carboxylate) resins for chemical amplified **photoresists**)

L31 ANSWER 32 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:565473 HCAPLUS
DOCUMENT NUMBER: 131:221220
TITLE: Radiation-sensitive resin composition useful as chemically amplified resist
INVENTOR(S): Suwa, Mitsufumi; Iwasawa, Haruo; Yamamoto, Masafumi; Kajita, Toru
PATENT ASSIGNEE(S): JSR Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11242335	A2	19990907	JP 1998-60381 <--	19980226

PRIORITY APPLN. INFO.: JP 1998-60381 <-- 19980226

GI



I

AB The title resin composition contains a resin insol. or slightly soluble in alkali having a repeating unit I (R1-6 = H, C1-6 straight-chain or branched alkyl, 5- to 8-membered cyclic alkyl, R1 and R2 and R3 and R4 may link each other to form a 5- to 8-membered cyclic alkyl; n = 0-3) and a radiation-sensitive acid-generator. The composition shows high storage stability, transparency toward

radiation, and developability and provides a high resolution pattern with good dry etch resistance and profile.

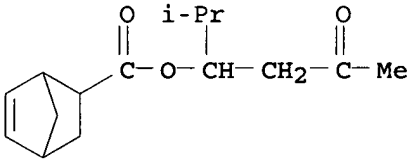
IT **242131-72-2P**
(radiation-sensitive **resist** composition containing acid generator and polymer with norbornene group)

RN 242131-72-2 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1-(1-methylethyl)-3-oxobutyl ester, polymer with 2-propenoic acid (9CI) (CA INDEX NAME)

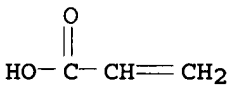
CM 1

CRN 242131-71-1
CMF C15 H22 O3



CM 2

CRN 79-10-7
CMF C3 H4 O2



IC ICM G03F007-038
ICS C08F032-00; C08L045-00; G03F007-004; H01L021-027; C09D145-00

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38

ST radiation resist norbornene group polymer; acid generator chem **amplification resist**

IT **Resists**
(radiation-sensitive, chemical **amplification**; radiation-sensitive **resist** composition containing acid generator and polymer with norbornene group)

IT 238070-00-3P 242131-68-6P 242131-70-0P **242131-72-2P**
242131-73-3P 242131-74-4P
(radiation-sensitive **resist** composition containing acid generator and polymer with norbornene group)

L31 ANSWER 33 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:735446 HCAPLUS
DOCUMENT NUMBER: 130:45302
TITLE: Resist containing nitrile compound and pattern formation using same
INVENTOR(S): Takechi, Satoshi; Kodachi, Akiko
PATENT ASSIGNEE(S): Fujitsu Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10301285	A2	19981113	JP 1997-112698	1997 0430 <--
JP 3770694	B2	20060426		

PRIORITY APPLN. INFO.: JP 1997-112698 1997 0430 <--

AB The chemical-amplified resist material contains an acid-sensitive compound having a structural unit in which the protected alkali-soluble group is released by acid to make the compound alkali-soluble, an acid-generating agent that generates acid by irradiation, and a nitrile compound The material is coated on a substrate, selectively exposed to radiation, post-baked, and then developed to form a resist pattern. The composition shows high resolution, photosensitivity, dry etch resistance, and environmental stability.

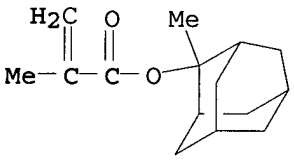
IT **177080-68-1P**, 2-Methyl-2-adamantyl methacrylate-mevalonolactone methacrylate copolymer **209982-57-0P**, 2-Ethyl-2-adamantyl methacrylate-mevalonolactone methacrylate copolymer
(chemical **amplification resist** composition containing acid-sensitive compound, acid generator, and nitrile compound)

RN 177080-68-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

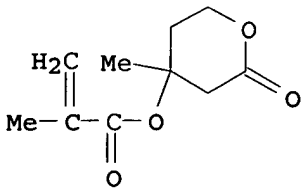
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

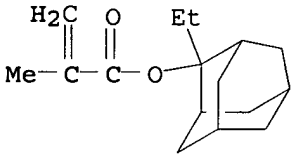
CRN 177080-66-9
CMF C10 H14 O4



RN 209982-57-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

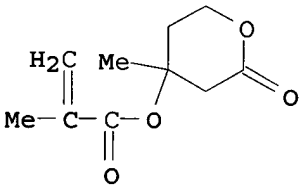
CM 1

CRN 209982-56-9
CMF C16 H24 O2



CM 2

CRN 177080-66-9
CMF C10 H14 O4



IC ICM G03F007-039
ICS G03F007-004; G03F007-38; H01L021-027; H01L021-312
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST chem **amplification resist** nitrile compd; acid sensitive compd chem **amplification resist**
IT **Resists**
(chemical **amplification resist** composition containing acid-sensitive compound, acid generator, and nitrile compound)
IT 86-29-3, Diphenylacetonitrile 107-13-1, 2-Propenenitrile, uses 126-98-7, Methacrylonitrile 15802-18-3D, α-Cyanoacrylic acid, esters 23074-42-2, 1-Cyanoadamantane 26352-07-8, Methacrylic acid-methacrylonitrile copolymer 51896-79-8, Cyanostyrene 64404-53-1D, esters
(chemical **amplification resist** composition containing

acid-sensitive compound, acid generator, and nitrile compound)

IT **177080-68-1P**, 2-Methyl-2-adamantyl methacrylate-mevalonolactone methacrylate copolymer **209982-57-0P**, 2-Ethyl-2-adamantyl methacrylate-mevalonolactone methacrylate copolymer
(chemical **amplification resist** composition containing acid-sensitive compound, acid generator, and nitrile compound)

IT 66003-78-9, Triphenylsulfonium triflate 216762-47-9, Acrylonitrile-methacrylic acid-2-methyl-2-adamantyl methacrylate copolymer
(chemical **amplification resist** composition containing acid-sensitive compound, acid generator, and nitrile compound)

L31 ANSWER 34 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:555888 HCAPLUS
DOCUMENT NUMBER: 129:209343
TITLE: Chemically amplified resist containing vinylbenzenepropionic acid derivative copolymer and pattern formation using same
INVENTOR(S): Yamashita, Yoshio
PATENT ASSIGNEE(S): Oki Electric Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10228112	A2	19980825	JP 1997-33846 <--	19970218
JP 3628135	B2	20050309		

PRIORITY APPLN. INFO.: JP 1997-33846 <-- 19970218

AB The title resist contains, as a base resin, a (co)polymer having a monomer unit CH[C6H4CR(CH2)nCO2H-p]CH2 (R = H or CmH2m+1; m = 1-3) or a (co)polymer prepared by polymerization of monomer(s) containing CH2:CH[C6H4CR(CH2)nCO2H-p]. The resist may contain (1) a p-vinyl-β-alkylhydrocinnamic acid-tert-Bu p-vinyl-β-alkylhydrocinnamate copolymer or a p-vinylphenyl-β-alkylhydropropionic acid-methacrylic ester copolymer as a base resin and an acid-generating agent that generates acid upon light irradiation or (2) a p-vinylphenyl-β-alkylhydropropionic acid-Me p-vinyl-β-alkylhydrocinnamate copolymer base resin, the acid-generating agent, and a dissoln. inhibitor that inhibits the solubility of the base resin in alkaline solns. and is decomposed by the action of the acid to lose the dissoln. inhibiting ability. A patterning method using the compns. is also claimed. The resists show high transparency toward ArF excimer lasers and dry etching resistance.

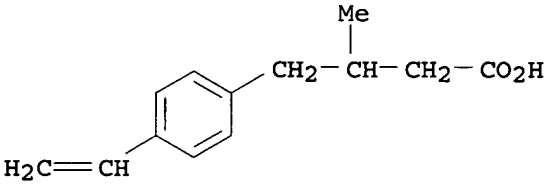
IT **212255-88-4P**
(chemical **amplification resist** composition containing vinylbenzenepropionic acid derivative copolymer and acid generator)

RN 212255-88-4 HCAPLUS

CN Benzenebutanoic acid, 4-ethenyl-β-methyl-, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

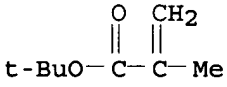
CM 1

CRN 212255-87-3
CMF C13 H16 O2



CM 2

CRN 585-07-9
CMF C8 H14 O2



IC ICM G03F007-039
ICS G03F007-004; G03F007-40; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
ST resist vinyl benzenepropionic acid copolymer; acid generator resist; dissoln inhibitor chem **amplification resist**
IT **Resists**
(chemical **amplification**; chemical **amplification resist** composition containing vinylbenzenepropionic acid copolymer and acid generator)
IT 212255-81-7P 212255-85-1P **212255-88-4P**
(chemical **amplification resist** composition containing vinylbenzenepropionic acid derivative copolymer and acid generator)
IT 66003-78-9, Triphenylsulfonium triflate
(chemical **amplification resist** composition containing vinylbenzenepropionic acid derivative copolymer and acid generator)
IT 37994-89-1
(dissoln. inhibitor; chemical **amplification resist** composition containing vinylbenzenepropionic acid derivative copolymer and acid generator)

L31 ANSWER 35 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:535423 HCAPLUS
DOCUMENT NUMBER: 129:154694
TITLE: Chemical-**amplification** positive photoresist composition
INVENTOR(S): Uetani, Yasunori; Fujishima, Hiroaki; Miya, Yoshiko

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DOCUMENT TYPE: **Patent**
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 856773	A1	19980805	EP 1998-101371	1998 0127
			<--	
EP 856773	B1	20010613		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 10274852	A2	19981013	JP 1998-12406	1998 0126
			<--	
JP 3546679	B2	20040728		
TW 482946	B	20020411	TW 1998-87101061	1998 0126
			<--	
PRIORITY APPLN. INFO.:			JP 1997-15353 A	1997 0129
			<--	

AB The present invention provides a chemical-**amplification** pos. photoresist composition comprising a resin component and an acid generator, which is superior in various resist performances such as resolution, and is particularly superior in adhesion to a substrate, the resin component having a butyrolactone residue which may be substituted with an alkyl group and a group capable of cleaving by action of an acid.

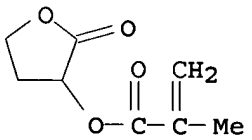
IT **195000-67-0P 210816-41-4P**
(preparation and use in preparing chemical-**amplification** pos. **photoresist** compns.)

RN 195000-67-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

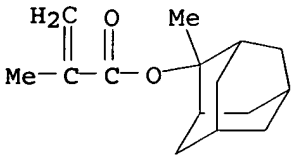
CM 1

CRN 195000-66-9
CMF C8 H10 O4



CM 2

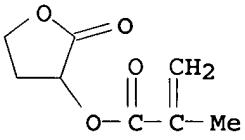
CRN 177080-67-0
CMF C15 H22 O2



RN 210816-41-4 HCAPLUS
CN Tricyclo[3.3.1.13,7]decane-1-carboxylic acid, 2-[1-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]ethyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

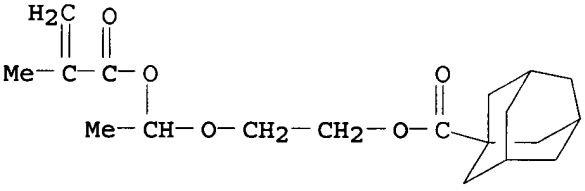
CM 1

CRN 195000-66-9
CMF C8 H10 O4



CM 2

CRN 181894-81-5
CMF C19 H28 O5



IC ICM G03F007-039
ICS G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST chem **amplification photoresist** resin butyrolactone group
IT **Photoresists**
(chemical-**amplification**; containing butyrolactone group-containing resins)
IT 120-07-0, N-Phenyldiethanolamine 10409-06-0, Diphenyldisulfone 24544-04-5, 2,6-Diisopropylaniline

(chemical-**amplification** pos. **photoresist** compns. containing butyrolactone group-containing resins and)
IT 177080-67-0P 181894-81-5P 195000-66-9P
(preparation and reaction in preparing butyrolactone group-containing resins for chemical-**amplification** pos. **photoresist** compns.)
IT **195000-67-0P** 210816-40-3P **210816-41-4P**
210816-42-5P 210816-43-6P 210816-44-7P 210816-45-8P
(preparation and use in preparing chemical-**amplification** pos. **photoresist** compns.)
IT 79-41-4, Methacrylic acid, reactions 110-86-1, Pyridine, reactions 121-44-8, Triethylamine, reactions 585-07-9, tert-Butyl methacrylate 702-98-7, 2-Methyl-2-adamantanol 920-46-7, Methacrylic chloride 2094-72-6 5061-21-2, α-Bromo-γ-butyrolactone 7534-94-3, Isobornyl methacrylate 51920-52-6, 1-Ethoxyethyl methacrylate 138554-09-3, 1-Isobutoxyethyl methacrylate
(reaction in preparing butyrolactone group-containing resins for chemical-**amplification** pos. **photoresist** compns.)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 36 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:407889 HCAPLUS
DOCUMENT NUMBER: 129:154699
TITLE: Chemically amplified photoresist composition and patterning using it
INVENTOR(S): Maeda, Katsumi; Iwasa, Shigeyuki; Nakano, Kaichiro; Hasegawa, Etsuo
PATENT ASSIGNEE(S): NEC Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10171122	A2	19980626	JP 1996-335603	1996 1216 <--
JP 2943740	B2	19990830		

PRIORITY APPLN. INFO.: JP 1996-335603 1996 1216 <--

AB In the title composition containing a resin in which the acid-decomposable groups are decomposed by the action of acid to increase the solubility in aqueous alkaline solns. and a photoacid-generating agent, the acid-decomposable group has the general formula CMe2R1OR2 (R1 = C6-10 divalent hydrocarbon having cyclic hydrocarbon groups; R2 = H, C1-4 alkyl, acyl). The composition is applied on a substrate to be processed, pre-baked, patternwise exposed with light of wavelength 180-220 nm, post-baked, and developed to form a resist pattern. The composition shows high transparency, dry-etching resistance,

adhesion to substrates, resolution, and developability.

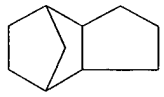
IT **210640-76-9P 210715-08-5P 210715-10-9P**
210715-11-0P
(patterning of chemical amplified **photoresist** composition with UV)

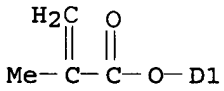
RN 210640-76-9 HCAPLUS

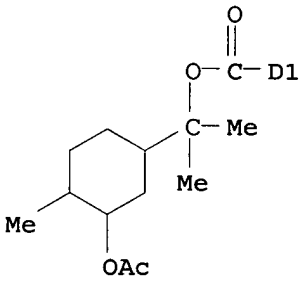
CN 4,7-Methano-1H-indenecarboxylic acid, octahydro-2(or 5)-[(2-methyl-1-oxo-2-propenyl)oxy]-, 1-[3-(acetyloxy)-4-methylcyclohexyl]-1-methylethyl ester, polymer with octahydro-2(or 5)-[(2-methyl-1-oxo-2-propenyl)oxy]-4,7-methano-1H-indenecarboxylic acid (9CI) (CA INDEX NAME)

CM 1

CRN 210640-75-8
CMF C27 H40 O6
CCI IDS

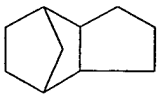




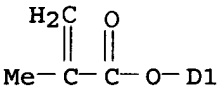


CM 2

CRN 210640-74-7
CMF C15 H20 O4
CCI IDS



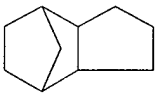
D1— CO_2H

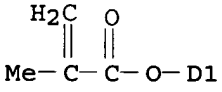


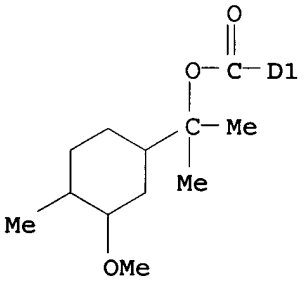
RN 210715-08-5 HCAPLUS
CN 4,7-Methano-1H-indenecarboxylic acid, octahydro-2(or 5)-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with 1-(3-methoxy-4-methylcyclohexyl)-1-methylethyl octahydro-2(or 5)-[(2-methyl-1-oxo-2-propenyl)oxy]-4,7-methano-1H-indenecarboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 210640-79-2
CMF C26 H40 O5
CCI IDS

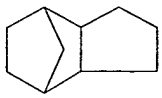




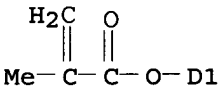


CM 2

CRN 210640-74-7
CMF C15 H20 O4
CCI IDS



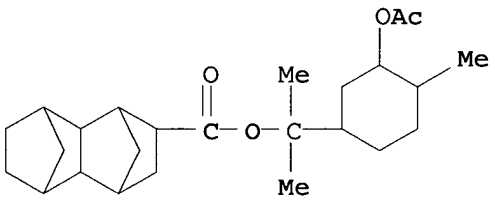
D1—CO_2H

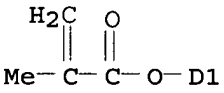


RN 210715-10-9 HCAPLUS
CN 1,4:5,8-Dimethanonaphthalene-2-carboxylic acid, decahydro-6(or 7)-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with 1-[3-(acetyloxy)-4-methylcyclohexyl]-1-methylethyl decahydro-6(or 7)-[(2-methyl-1-oxo-2-propenyl)oxy]-1,4:5,8-dimethanonaphthalene-2-carboxylate (9CI) (CA INDEX NAME)

CM 1

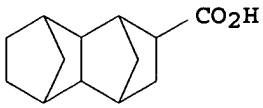
CRN 210640-85-0
CMF C29 H42 O6
CCI IDS

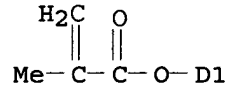




CM 2

CRN 195398-48-2
CMF C17 H22 O4
CCI IDS

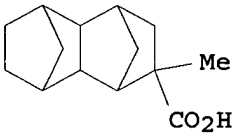


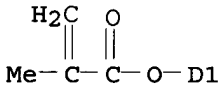


RN 210715-11-0 HCAPLUS
CN 1,4:5,8-Dimethanonaphthalene-2-carboxylic acid, decahydro-2-methyl-6(or 7)-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with 1-[3-(acetyloxy)-4-methylcyclohexyl]-1-methylethyl decahydro-6(or 7)-[(2-methyl-1-oxo-2-propenyl)oxy]-1,4:5,8-dimethanonaphthalene-2-carboxylate (9CI) (CA INDEX NAME)

CM 1

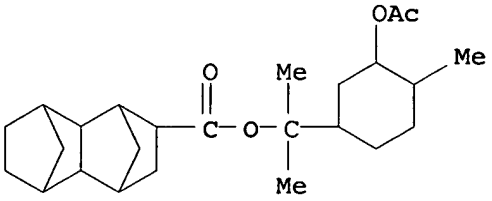
CRN 210640-88-3
CMF C18 H24 O4
CCI IDS

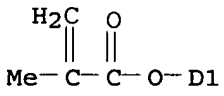




CM 2

CRN 210640-85-0
CMF C29 H42 O6
CCI IDS





IC ICM G03F007-039
ICS G03F007-30; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST chem **amplification photoresist** acid decomposable group; cycloalkyl ester acrylate polymer resist UV
IT **Photoresists**
(UV; patterning of chemical amplified **photoresist** composition with UV)
IT 210573-91-4P, 2-Methoxy-8-acetoxy-p-menthane
(deacetylation of; patterning of chemical amplified **photoresist** composition with UV)
IT 210573-90-3P, 2-Hydroxy-8-acetoxy-p-menthane
(methylation of; patterning of chemical amplified **photoresist** composition with UV)
IT 184856-56-2P 195398-48-2P 210573-88-9P, 2-Acetoxy-p-menthan-8-ol 210573-89-0P, 2-Methoxy-p-menthan-8-ol 210715-12-1P
(patterning of chemical amplified **photoresist** composition with UV)
IT 210573-84-5P 210573-85-6P 210573-86-7P 210573-87-8P **210640-76-9P** 210640-85-0P 210640-88-3P 210641-03-5P 210641-20-6P **210715-08-5P** 210715-09-6P **210715-10-9P** **210715-11-0P** 210715-13-2P 210715-14-3P 210715-15-4P
(patterning of chemical amplified **photoresist** composition with UV)
IT 120-74-1P
(patterning of chemical amplified **photoresist** composition with UV)
IT 173161-66-5P 195398-50-6P 195891-99-7P
(patterning of chemical amplified **photoresist** composition with UV)
IT 80-26-2 814-68-6, Acryloyl chloride 920-46-7, Methacryloyl chloride 28132-01-6, Tricyclo[5.2.1.02,6]decane-4,8-dimethanol 38049-26-2, Dihydrocarveol 58506-23-3, 2,8-Dihydroxy-p-menthane 195057-79-5, 8-tert-Butoxycarbonyltetracyclo[4.4.0.12,5.17,10]-3-dodecene
(patterning of chemical amplified **photoresist** composition with UV)

L31 ANSWER 37 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:398618 HCAPLUS
DOCUMENT NUMBER: 129:115627
TITLE: Chemical **amplification**-type resist

and pattern formation
INVENTOR(S): Takechi, Satoshi; Kotachi, Akiko
PATENT ASSIGNEE(S): Fujitsu Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 10161313	A2	19980619	JP 1996-320105		1996 1129 <--
JP 3380128	B2	20030224			
JP 2003149817	A2	20030521	JP 2002-297761		1996 1129 <--
TW 502134	B	20020911	TW 1997-86117963		1997 1128 <--
US 2001003640	A1	20010614	US 2000-739259		2000 1219 <--
US 6329125	B2	20011211			
PRIORITY APPLN. INFO.:			JP 1995-162287	A	1995 0628 <--
			JP 1995-178717	A	1995 0714 <--
			JP 1995-312722	A	1995 1130 <--
			JP 1996-50264	A	1996 0307 <--
			US 1996-673739	A2	1996 0627 <--
			JP 1996-320105	A3	1996 1129 <--
			US 1997-969368	A3	1997 1128 <--

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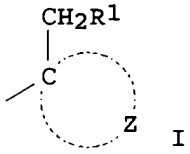


I

AB The chemical **amplification resist** composition contains an acid-sensitive compound having a structural unit bearing an alkali-soluble group protected by an alicyclic hydrocarbon-containing part I (R1 = Me, Et, Pr, iso-Pr; Z = atoms required to form an alicyclic hydrocarbon group along with the C), in which the alkali-soluble group is released by the action of acid so that the compound becomes alkali-soluble, and an acid-generating agent that generates acid upon irradiation The composition is coated on a substrate to be processed, selectively exposed to radiation to form a latent image, post-baked, and developed the image to form a resist pattern. The material shows high sensitivity (≤5 mJ/cm2) in ArF lithog., exposure latitude, and dry etch resistance.

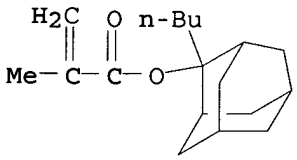
IT **209982-55-8P**, 2-Butyl-2-adamantyl methacrylate-mevalonolactone methacrylate copolymer **209982-57-0P**, 2-Ethyl-2-adamantyl methacrylate-mevalonolactone methacrylate copolymer **209982-58-1P**, 2-Butyl-2-adamantyl methacrylate-methacrylic acid copolymer **209982-59-2P**, 2-Butyl-2-adamantyl methacrylate-itaconic acid anhydride copolymer
(chemical **amplification resist** composition containing acid-sensitive compound with alkali-soluble group protected by alicyclic group)

RN 209982-55-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-butyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

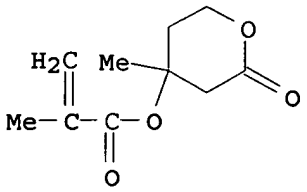
CM 1

CRN 209982-54-7
CMF C18 H28 O2



CM 2

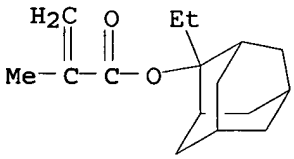
CRN 177080-66-9
CMF C10 H14 O4



RN 209982-57-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

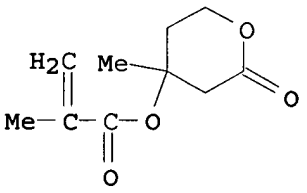
CM 1

CRN 209982-56-9
CMF C16 H24 O2



CM 2

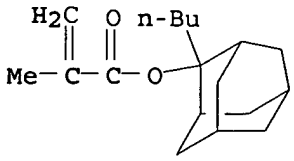
CRN 177080-66-9
CMF C10 H14 O4



RN 209982-58-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 2-butyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

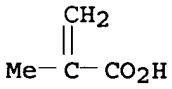
CM 1

CRN 209982-54-7
CMF C18 H28 O2



CM 2

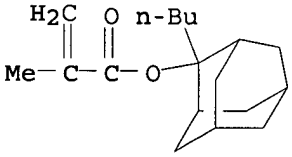
CRN 79-41-4
CMF C4 H6 O2



RN 209982-59-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-butyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with dihydro-3-methylene-2,5-furandione (9CI) (CA INDEX NAME)

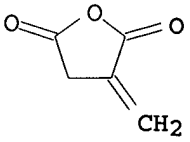
CM 1

CRN 209982-54-7
CMF C18 H28 O2



CM 2

CRN 2170-03-8
CMF C5 H4 O3



IC ICM G03F007-039
ICS G03F007-039; G03F007-004; G03F007-033; G03F007-38; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38

ST chem **amplification resist** acid sensitive compd; alicyclic protected alkali sol group resist

IT **Resists**
(chemical **amplification resist** composition containing acid-sensitive compound with alkali-soluble group protected by alicyclic group)

IT **209982-55-8P**, 2-Butyl-2-adamantyl methacrylate-mevalonolactone methacrylate copolymer **209982-57-0P**, 2-Ethyl-2-adamantyl methacrylate-mevalonolactone methacrylate copolymer **209982-58-1P**, 2-Butyl-2-adamantyl methacrylate-methacrylic acid copolymer **209982-59-2P**, 2-Butyl-2-adamantyl methacrylate-itaconic acid anhydride copolymer 209982-60-5P, 2-Butyl-2-adamantyl methacrylate-tert-butyl methacrylate-methacrylic acid copolymer
(chemical **amplification resist** composition containing acid-sensitive compound with alkali-soluble group protected by alicyclic group)

L31 ANSWER 38 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:471371 HCAPLUS
DOCUMENT NUMBER: 127:227270
TITLE: New protective groups in alicyclic methacrylate polymers for 193-nm resists
AUTHOR(S): Nozaki, Koji; Yano, Ei
CORPORATE SOURCE: Fujitsu Laboratories Ltd., Atugi, 243-01, Japan
SOURCE: Journal of Photopolymer Science and Technology (1997), 10(4), 545-550
CODEN: JSTEEW; ISSN: 0914-9244
PUBLISHER: Technical Association of Photopolymers, Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

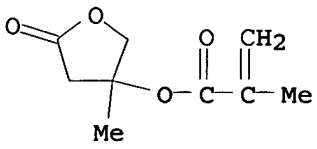
AB Methacrylate polymer with two acid labile protective groups, mevalonic lactone and 2-methyl-2-adamantanol was used as a single layer resist for 193 nm exposure. To improve lithog. performance of this resist the lactone group was replaced by other protective groups. The polarity and acid cleavability of these protective groups and their matching with 2-methyl-2-adamantyl group was studied. Among the 5 studied protective groups, 3-hydroxy-γ-butyrolactone yielded the best lithog. properties.

IT **195000-64-7P 195000-67-0P 195000-69-2P 195000-71-6P 195000-73-8P**
(lithog. chemical **amplification photoresist** from methyladamantanol methacrylate copolymer with methacrylate containing polar protective group)

RN 195000-64-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl, polymer with tetrahydro-3-methyl-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

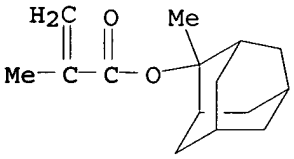
CM 1

CRN 195000-63-6
CMF C9 H12 O4



CM 2

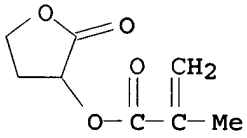
CRN 177080-67-0
CMF C15 H22 O2



RN 195000-67-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

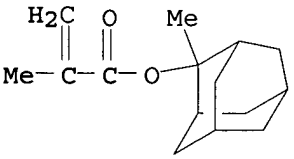
CM 1

CRN 195000-66-9
CMF C8 H10 O4



CM 2

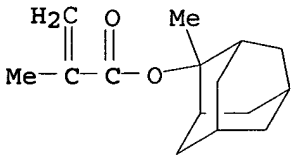
CRN 177080-67-0
CMF C15 H22 O2



RN 195000-69-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

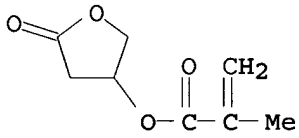
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

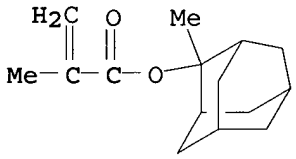
CRN 130224-95-2
CMF C8 H10 O4



RN 195000-71-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

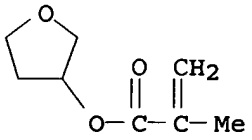
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

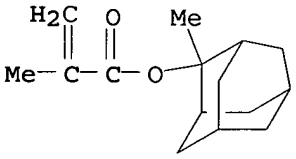
CRN 4245-24-3
CMF C8 H12 O3



RN 195000-73-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with (2-oxo-1,3-dioxolan-4-yl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

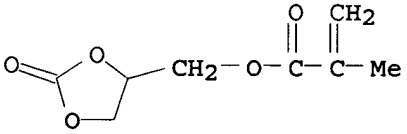
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

CRN 13818-44-5
CMF C8 H10 O5



CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST lithog photoresist methacrylate polymer protective group; methyladamantanol methacrylate copolymer chem **amplification photoresist**
IT **Photoresists**
(chemical **amplification**; containing methyladamantanol methacrylate copolymer with methacrylate containing polar protective group)
IT 920-46-7, Methacryloyl chloride
(in preparation of monomer for polymerization with methyladamantanol methacrylate for application as lithog. chemical **amplification photoresist**)
IT 108-65-6, Propylene glycol-1-methyl ether-2-acetate
(lithog. chemical **amplification photoresist** from methyladamantanol methacrylate copolymer with methacrylate containing polar protective group)
IT **195000-64-7P 195000-67-0P 195000-69-2P 195000-71-6P 195000-73-8P**

(lithog. chemical **amplification photoresist**
from methyladamantanol methacrylate copolymer with methacrylate
containing polar protective group)
IT 66003-78-9, Triphenylsulfonium triflate
(lithog. chemical **amplification photoresist**
from methyladamantanol methacrylate copolymer with methacrylate
containing polar protective group)
IT 4245-24-3P 130224-95-2P
(polymerization with methyladamantanol methacrylate for application as
lithog. chemical **amplification photoresist**)
IT 13818-44-5 195000-63-6
(polymerization with methyladamantanol methacrylate for application as
lithog. chemical **amplification photoresist**)
IT 195000-66-9P
(polymerization with methyladamantanol methacrylate for application as
lithog. chemical **amplification photoresist**)

L31 ANSWER 39 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:134745 HCAPLUS
DOCUMENT NUMBER: 126:150516
TITLE: Chemical **amplification**
resist composition and method to
manufacture resist master using the same
INVENTOR(S): Nozaki, Koji; Yano, Ei; Watanabe, Keiji;
Namiki, Takahisa; Igarashi, Miwa; Kuramitsu,
Yoko; Takechi, Satoshi; Kotachi, Akiko;
Takahashi, Makoto
PATENT ASSIGNEE(S): Fujitsu Ltd., Japan
SOURCE: Ger. Offen., 87 pp.
CODEN: GWXXBX
DOCUMENT TYPE: **Patent**
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19626003	A1	19970102	DE 1996-19626003	19960628
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DE 19626003	C2	20020214		
JP 09090637	A2	19970404	JP 1995-312722	19951130
			<--	
JP 3297272	B2	20020702		
JP 09073173	A2	19970318	JP 1996-50264	19960307
			<--	
JP 3751065	B2	20060301		
KR 206664	B1	19990701	KR 1996-24415	19960627
			<--	
JP 2006091898	A2	20060406	JP 2005-288764	20050930

PRIORITY APPLN. INFO.: JP 1995-162287 A 1995 0628 <--
JP 1995-178717 A 1995 0714 <--
JP 1995-312722 A 1995 1130 <--
JP 1996-50264 A 1996 0307 <--

AB The title alkali-developable resist composition comprises a compound with lactone component (Markush structure given) and alicyclic hydrocarbyl component (Markush structure given). The lactone component may be (±)-mevalonic lactone and the alicyclic hydrocarbyl component may be 2-alkyl-2-adamantyl. The composition is useful in an Excimer laser lithog. to produce resist-master with high sensitivity and excellent dry etch-resistance.

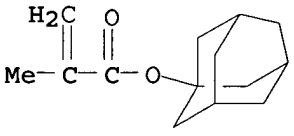
IT **169223-75-0P**, tert-Butyl acrylate- 1-adamantyl methacrylate copolymer **181020-29-1P 181531-12-4P 181531-13-5P 186585-40-0P 186585-44-4P 186585-47-7P 186585-49-9P 186585-51-3P 186585-53-5P 186585-55-7P 186585-57-9P 186585-60-4P 186585-63-7P 186585-66-0P 186585-68-2P 186585-70-6P 186585-72-8P 186585-75-1P 186585-84-2P 186585-90-0P 186585-92-2P 186585-93-3P 186585-94-4P 186585-95-5P 186585-96-6P 186585-97-7P 186585-98-8P 186585-99-9P 186586-00-5P 186586-01-6P 186586-02-7P 186586-03-8P 186586-04-9P 186586-06-1P 186586-08-3P**
(chemical **amplification resist** composition)

RN 169223-75-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, tricyclo[3.3.1.13,7]dec-1-yl ester, polymer with 1,1-dimethylethyl 2-propenoate (9CI) (CA INDEX NAME)

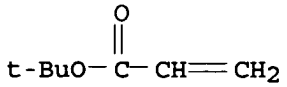
CM 1

CRN 16887-36-8
CMF C14 H20 O2



CM 2

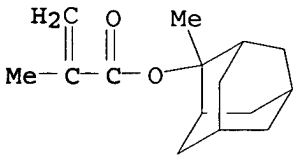
CRN 1663-39-4
CMF C7 H12 O2



RN 181020-29-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

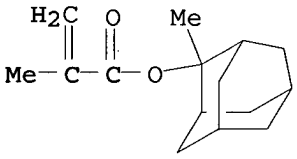
CRN 177080-67-0
CMF C15 H22 O2



RN 181531-12-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

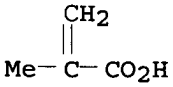
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

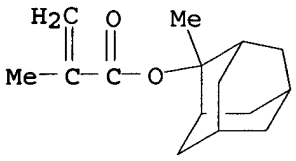
CRN 79-41-4
CMF C4 H6 O2



RN 181531-13-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 3-oxocyclohexyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

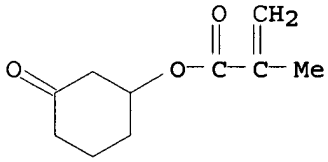
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

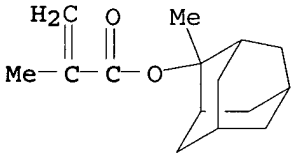
CRN 158602-67-6
CMF C10 H14 O3



RN 186585-40-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 1,1-dimethylethyl 2-propenoate (9CI) (CA INDEX NAME)

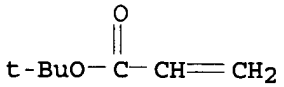
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

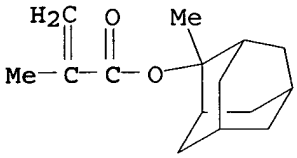
CRN 1663-39-4
CMF C7 H12 O2



RN 186585-44-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethyl-3-oxobutyl ester, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

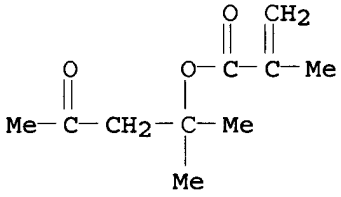
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

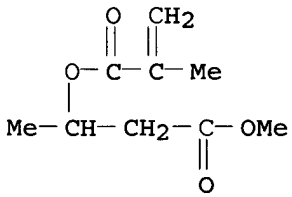
CRN 93940-09-1
CMF C10 H16 O3



RN 186585-47-7 HCAPLUS
CN Butanoic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-, methyl ester, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

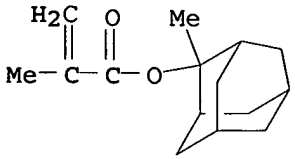
CRN 186585-46-6
CMF C9 H14 O4



CM 2

CRN 177080-67-0

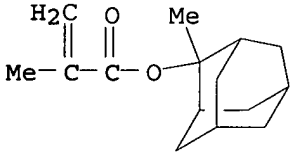
CMF C15 H22 O2



RN 186585-49-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

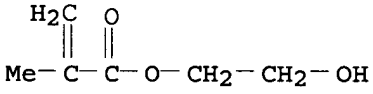
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

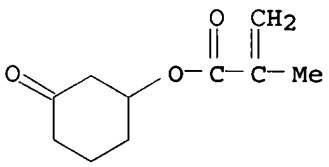
CRN 868-77-9
CMF C6 H10 O3



RN 186585-51-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methylcyclohexyl ester, polymer with 3-oxocyclohexyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

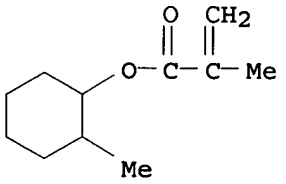
CM 1

CRN 158602-67-6
CMF C10 H14 O3



CM 2

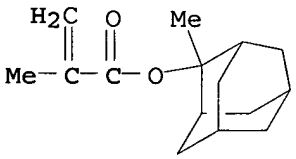
CRN 46187-22-8
CMF C11 H18 O2



RN 186585-53-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

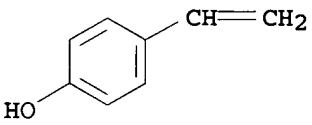
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

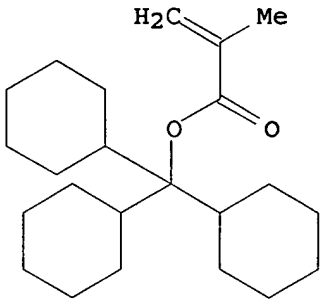
CRN 2628-17-3
CMF C8 H8 O



RN 186585-55-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, tricyclohexylmethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

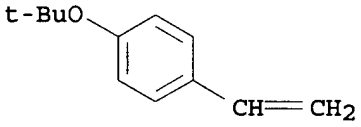
CM 1

CRN 186585-54-6
CMF C23 H38 O2



CM 2

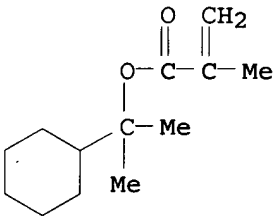
CRN 95418-58-9
CMF C12 H16 O



RN 186585-57-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-cyclohexyl-1-methylethyl ester, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

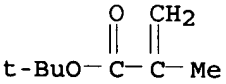
CM 1

CRN 186585-56-8
CMF C13 H22 O2



CM 2

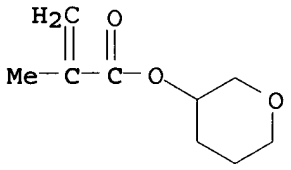
CRN 585-07-9
CMF C8 H14 O2



RN 186585-60-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-cyclohexyl-1-methylethyl ester, polymer with tetrahydro-2H-pyran-3-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

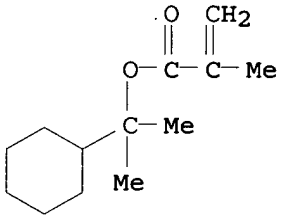
CM 1

CRN 186585-59-1
CMF C9 H14 O3



CM 2

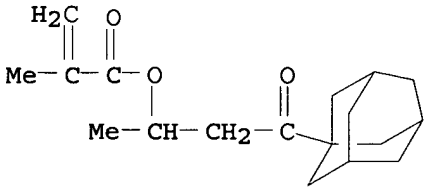
CRN 186585-56-8
CMF C13 H22 O2



RN 186585-63-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-methyl-3-oxo-3-tricyclo[3.3.1.13,7]dec-1-ylpropyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

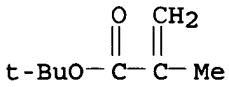
CM 1

CRN 186585-62-6
CMF C18 H26 O3



CM 2

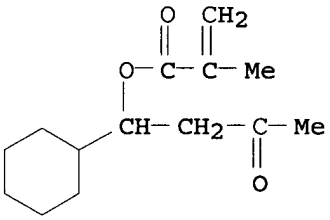
CRN 585-07-9
CMF C8 H14 O2



RN 186585-66-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-cyclohexyl-3-oxobutyl ester, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

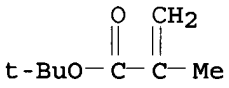
CM 1

CRN 186585-65-9
CMF C14 H22 O3



CM 2

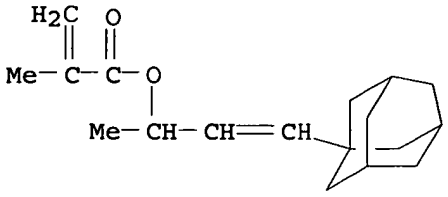
CRN 585-07-9
CMF C8 H14 O2



RN 186585-68-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-methyl-3-tricyclo[3.3.1.13,7]dec-1-yl-2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

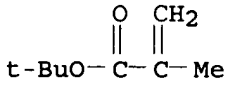
CM 1

CRN 186585-67-1
CMF C18 H26 O2



CM 2

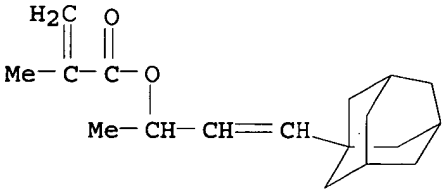
CRN 585-07-9
CMF C8 H14 O2



RN 186585-70-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-methyl-3-tricyclo[3.3.1.13,7]dec-1-yl-2-propenyl ester, polymer with 3-oxocyclohexyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

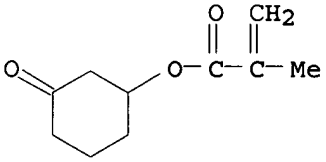
CM 1

CRN 186585-67-1
CMF C18 H26 O2



CM 2

CRN 158602-67-6
CMF C10 H14 O3

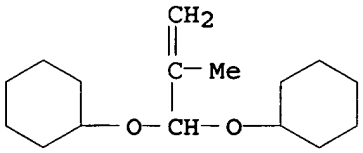


RN 186585-72-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1,1'-[(2-methyl-2-propenylidene)bis(oxy)]bis[cyclohexane] (9CI)

(CA INDEX NAME)

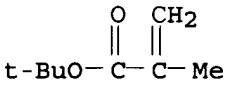
CM 1

CRN 186585-71-7
CMF C16 H28 O2



CM 2

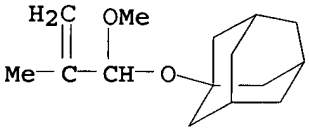
CRN 585-07-9
CMF C8 H14 O2



RN 186585-75-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-oxocyclohexyl ester, polymer with 1-[(1-methoxy-2-methyl-2-propenyl)oxy]tricyclo[3.3.1.13,7]decane (9CI) (CA INDEX NAME)

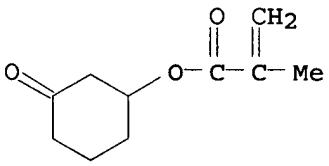
CM 1

CRN 186585-74-0
CMF C15 H24 O2



CM 2

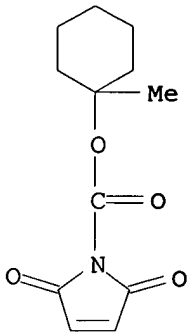
CRN 158602-67-6
CMF C10 H14 O3



RN 186585-84-2 HCAPLUS
CN 1H-Pyrrole-1-carboxylic acid, 2,5-dihydro-2,5-dioxo-, 1-methylcyclohexyl ester, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

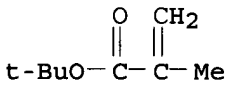
CM 1

CRN 186585-83-1
CMF C12 H15 N O4



CM 2

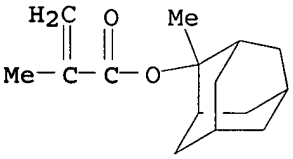
CRN 585-07-9
CMF C8 H14 O2



RN 186585-90-0 HCAPLUS
CN Butanedioic acid, methylene-, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

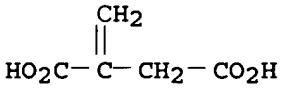
CRN 177080-67-0
CMF C15 H22 O2



CM 2

CRN 97-65-4

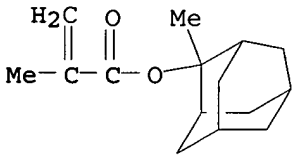
CMF C5 H6 O4



RN 186585-92-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 2-methyl-2-propenamide (9CI) (CA INDEX NAME)

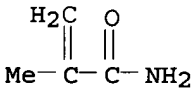
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

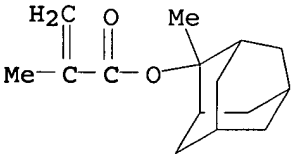
CRN 79-39-0
CMF C4 H7 N O



RN 186585-93-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 1H-pyrrole-2,5-dione (9CI) (CA INDEX NAME)

CM 1

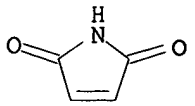
CRN 177080-67-0
CMF C15 H22 O2



CM 2

CRN 541-59-3

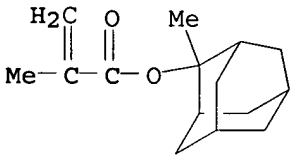
CMF C4 H3 N O2



RN 186585-94-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 3-ethenyldihydro-2,5-furandione (9CI) (CA INDEX NAME)

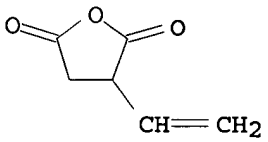
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

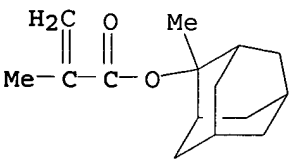
CRN 39739-64-5
CMF C6 H6 O3



RN 186585-95-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with tetrahydro-4,4-dimethyl-2-oxo-3-furanyl 2-propenoate (9CI) (CA INDEX NAME)

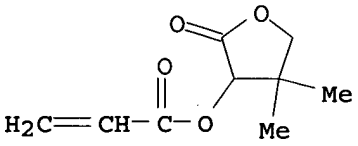
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

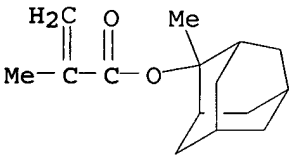
CRN 84822-49-1
CMF C9 H12 O4



RN 186585-96-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 2-propenal oxime (9CI) (CA INDEX NAME)

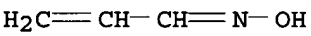
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

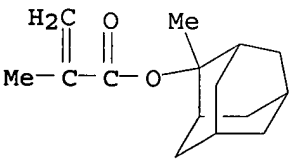
CRN 5314-33-0
CMF C3 H5 N O



RN 186585-97-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 1,3-dioxol-2-one (9CI) (CA INDEX NAME)

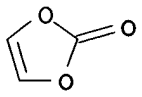
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

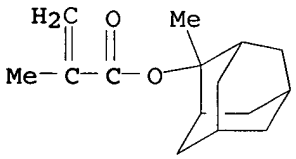
CRN 872-36-6
CMF C3 H2 O3



RN 186585-98-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 2-ethenyl-4,4-dimethyl-5(4H)-oxazolone (9CI) (CA INDEX NAME)

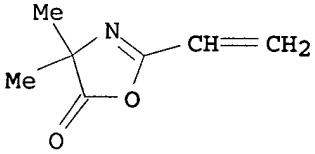
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

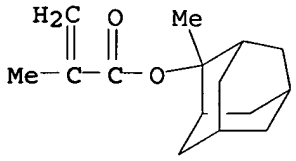
CRN 29513-26-6
CMF C7 H9 N O2



RN 186585-99-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 2-ethenyl-5,6-dihydro-5,5-dimethyl-4H-1,3-oxazine (9CI) (CA INDEX NAME)

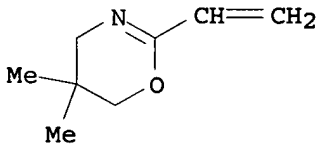
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

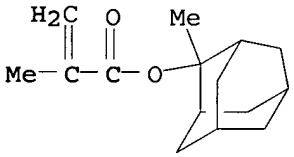
CRN 90154-90-8
CMF C8 H13 N O



RN 186586-00-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

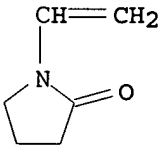
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

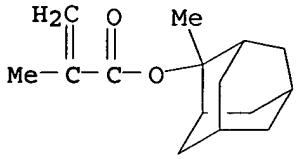
CRN 88-12-0
CMF C6 H9 N O



RN 186586-01-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 2-propenenitrile (9CI) (CA INDEX NAME)

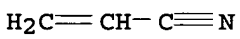
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

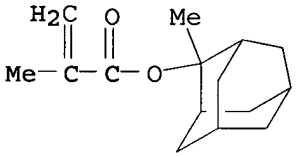
CRN 107-13-1
CMF C3 H3 N



RN 186586-02-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with ethenylnitrobenzene (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

CRN 1321-22-8
CMF C8 H7 N O2
CCI IDS

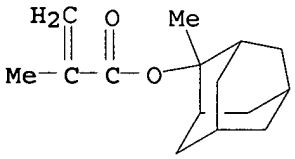
D1— CH═ CH_2

D1— NO_2

RN 186586-03-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 2-propenal (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

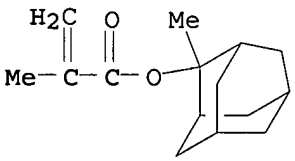
CRN 107-02-8
CMF C3 H4 O

H_2C═ CH— CH═ O

RN 186586-04-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with ethenyl acetate (9CI) (CA INDEX NAME)

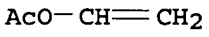
CM 1

CRN 177080-67-0
CMF C15 H22 O2



CM 2

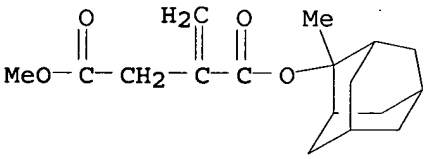
CRN 108-05-4
CMF C4 H6 O2



RN 186586-06-1 HCAPLUS
CN Butanedioic acid, methylene-, 4-methyl 1-(2-methyltricyclo[3.3.1.13,7]dec-2-yl) ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

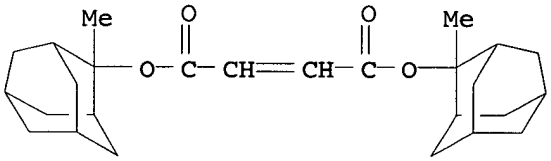
CRN 186586-05-0
CMF C17 H24 O4



RN 186586-08-3 HCAPLUS
CN 2-Butenedioic acid, polymer with bis(2-methyltricyclo[3.3.1.13,7]dec-2-yl) 2-butenedioate (9CI) (CA INDEX NAME)

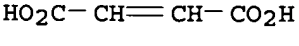
CM 1

CRN 186586-07-2
CMF C26 H36 O4



CM 2

CRN 6915-18-0
CMF C4 H4 O4



IC ICM G03F007-039
ICS G03F007-16

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
ST alkali developable chem **amplification resist** compn
IT Integrated circuits
Photolithography
Photoresists
(chemical **amplification resist** composition and process to manufacture **resist** master using the same)
IT 59269-51-1P, Polyvinylphenol **169223-75-0P**, tert-Butyl acrylate- 1-adamantyl methacrylate copolymer **181020-29-1P** **181531-12-4P** **181531-13-5P** 186585-31-9P, Methacryloyl chloride-mevalonic lactone copolymer 186585-32-0P, Cyclohexyl methacrylate-methacryloyl chloride-mevalonic lactone copolymer 186585-33-1P, p-Acetoxystyrene-methacryloyl chloride-mevalonic lactone copolymer 186585-34-2P, Norbornyl methacrylate-methacryloyl chloride-mevalonic lactone copolymer 186585-36-4P, 1-Adamantyl methacrylate-methacryloyl chloride-mevalonic lactone copolymer 186585-38-6P, 2-Methyl-2-adamantyl methacrylate-methacryloyl chloride-mevalonic lactone copolymer **186585-40-0P** **186585-44-4P** **186585-47-7P** **186585-49-9P** **186585-51-3P** **186585-53-5P** **186585-55-7P** **186585-57-9P** **186585-60-4P** **186585-63-7P** **186585-66-0P** **186585-68-2P** **186585-70-6P** **186585-72-8P** **186585-75-1P** 186585-78-4P 186585-81-9P **186585-84-2P** 186585-88-6P, tert-Butyl methacrylate; methacrylic acid; 2-methyl-2-adamantyl methacrylate copolymer **186585-90-0P** 186585-91-1P **186585-92-2P** **186585-93-3P** **186585-94-4P** **186585-95-5P** **186585-96-6P** **186585-97-7P** **186585-98-8P** **186585-99-9P** **186586-00-5P** **186586-01-6P** **186586-02-7P** **186586-03-8P** **186586-04-9P** **186586-06-1P** **186586-08-3P** 186586-09-4P 186586-11-8P
(chemical **amplification resist** composition)
IT 311814-86-5P
(chemical **amplification resist** composition)

L31 ANSWER 40 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:612457 HCAPLUS
DOCUMENT NUMBER: 125:234436
TITLE: Chemical **amplification**-type resist containing crown ether
INVENTOR(S): Kaimoto, Hiroko; Oikawa, Akira; Myata, Shuichi; Hatanaka, Yasunori; Ikeda, Yumiko
PATENT ASSIGNEE(S): Fujitsu Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08190193	A2	19960723	JP 1995-3217	1995

0112
<--
PRIORITY APPLN. INFO.: JP 1995-3217
1995
0112
<--

AB The resist comprises a mixture of a photo-acid generator, a base polymer with a releasable protective group, and a crown ether compound Deactivation of the acid before post baking is prevented.

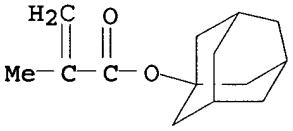
IT **143336-95-2P**
(chemical **amplification**-type **resist** containing crown ether compound)

RN 143336-95-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with tricyclo[3.3.1.13,7]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

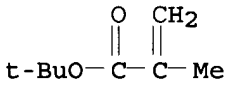
CM 1

CRN 16887-36-8
CMF C14 H20 O2



CM 2

CRN 585-07-9
CMF C8 H14 O2



IC ICM G03F007-004
ICS G03F007-004; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 37

ST chem **amplification resist** crown ether

IT **Resists**
(chemical-**amplification**; chemical **amplification**-type **resist** containing crown ether compound)

IT 14098-44-3, Benzo-15-crown-5 17455-13-9, 18-Crown-6 26030-67-1, Dicyclohexyl-15-crown-5
(chemical **amplification**-type **resist** containing crown ether compound)

IT **143336-95-2P**
(chemical **amplification**-type **resist** containing crown ether compound)

IT 161982-96-3
(chemical **amplification**-type **resist** containing

crown ether compound)

L31 ANSWER 41 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:606880 HCAPLUS
DOCUMENT NUMBER: 125:234432
TITLE: Chemical **amplification**-type resist solution with improved coatability
INVENTOR(S): Oota, Toshuki; Tanabe, Takayoshi; Tsuji, Akira
PATENT ASSIGNEE(S): Japan Synthetic Rubber Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08179500	A2	19960712	JP 1994-335607	1994 1221

<--

PRIORITY APPLN. INFO.: JP 1994-335607 1994 1221

<--

AB The title resist solution contains propylene glycol alkyl ether propionate as a solvent. The solution can be spin-coated on large-sized substrates to form an uniform resist film showing high photosensitivity and resolution and is useful for manufacture of elec. circuits. Thus, poly(hydroxystyrene) protected partially with tert-butoxycarbonyl group and Ph3S+.CF3SO3- were dissolved in propylene glycol monomethyl ether propionate to give a resist solution

IT **175284-06-7P**, tert-Butyl acrylate-vinylphenol copolymer
(chemical **amplification**-type **resist** composition containing propylene glycol alkyl ether propionate as solvent)
RN 175284-06-7 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with ethenylphenol (9CI) (CA INDEX NAME)

CM 1

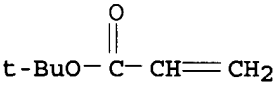
CRN 31257-96-2
CMF C8 H8 O
CCI IDS

D1—OH

D1—CH═CH$_2$

CM 2

CRN 1663-39-4
CMF C7 H12 O2



t-BuO—C(=O)—CH═CH$_2$

IC ICM G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
ST chem **amplification resist** soln; propylene glycol alkyl ether propionate solvent
IT **Resists**
(chemical **amplification**-type **resist** composition containing polypropylene glycol alkyl ether propionate as solvent)
IT 98516-33-7, Propylene glycol monomethyl ether propionate 181259-38-1
(chemical **amplification**-type **resist** composition containing propylene glycol alkyl ether propionate as solvent)
IT 59269-51-1DP, Polyhydroxystyrene, ethers with Bu bromoacetate 84775-35-9P 95418-59-0P, p-tert-Butoxystyrene-styrene copolymer 170636-47-2P, tert-Butyl acrylate-styrene-vinylphenol copolymer **175284-06-7P**, tert-Butyl acrylate-vinylphenol copolymer
(chemical **amplification**-type **resist** composition containing propylene glycol alkyl ether propionate as solvent)
IT 3089-11-0
(crosslinking agent; chemical **amplification**-type **resist** composition containing propylene glycol alkyl ether propionate as solvent)
IT 117458-06-7P 151533-21-0P
(dissoln. inhibitor; chemical **amplification**-type **resist** composition containing propylene glycol alkyl ether propionate as solvent)

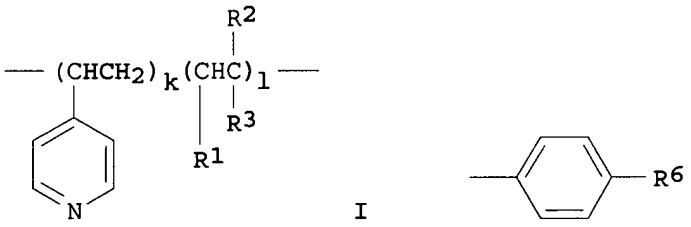
L31 ANSWER 42 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:808224 HCAPLUS
DOCUMENT NUMBER: 123:270794
TITLE: Chemical-**amplification** **photoresist** composition for semiconductor device manufacture

INVENTOR(S): Urano, Fumyoshi; Fuje, Hirotoshi; Negishi, Takaaki
PATENT ASSIGNEE(S): Wako Pure Chem Ind Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07128859	A2	19950519	JP 1993-298995	1993 1104 <--

PRIORITY APPLN. INFO.: JP 1993-298995 1993 1104 <--

GI



I

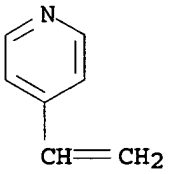
AB The resist composition consists of a resin selected from (i)-(iii): (i) a resin which becomes alkali-soluble by elimination of a protecting group with an acid, (ii) an alkali-soluble resin and a compound which becomes alkali-soluble by elimination of a protecting group with an acid, (iii) an alkali-soluble resin and a compound which crosslinks with the resin to become alkali-insol., an acid-generating photosensitive compound, p-vinylpyridine polymer I [R1 = H or II (R4 = H, C1-4 linear or branched alkyl, alkoxy, halo); R2 = H, Me; R3 = H, COOR5 (R5 = C1-4 linear or branched alkyl, 2-hydroxyethyl); k ≥1, l ≥0] as a sensitivity-adjusting agent, and a solvent. The resist composition is useful in semiconductor patterning using ≤300 nm far UV or KrF excimer laser beams (248.4 nm). A high-resolution patterning even in resolution limit is obtained.

IT **26100-41-4P**
(chemical-amplified **photoresists** containing p-vinylpyridine polymer for high resolution patterning in semiconductor device manufacture)

RN 26100-41-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 4-ethenylpyridine (9CI) (CA INDEX NAME)

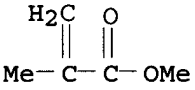
CM 1

CRN 100-43-6
CMF C7 H7 N



CM 2

CRN 80-62-6
CMF C5 H8 O2



IC ICM G03F007-039
ICS G03F007-004; G03F007-028; G03F007-038; H01L021-312
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
IT Semiconductor devices
(chemical-amplified **photoresists** containing p-vinylpyridine polymer for high resolution patterning in semiconductor device manufacture)
IT **Resists**
(photo-, chemical-**amplification**; chemical-amplified **photoresists** containing p-vinylpyridine polymer for high resolution patterning in semiconductor device manufacture)
IT 97-64-3, Ethyl lactate 111-96-6, Diethylene glycol dimethyl ether 3852-09-3, Methyl 3-methoxypropionate 84540-57-8, Propylene glycol monomethyl ether acetate
(chemical-amplified **photoresists** containing p-vinylpyridine polymer for high resolution patterning in semiconductor device manufacture)
IT 25232-41-1P, Poly(p-vinylpyridine) **26100-41-4P**
149642-75-1P 156862-09-8P, 1,3,5-Tris(isopropoxymethoxy)benzene
168904-82-3P 168904-83-4P
(chemical-amplified **photoresists** containing p-vinylpyridine polymer for high resolution patterning in semiconductor device manufacture)
IT 14159-45-6 24979-70-2, Poly(p-vinylphenol) 56817-85-7
64309-46-2 123589-22-0, p-tert-Butoxystyrene-p-hydroxystyrene copolymer 138529-81-4, Bis(cyclohexylsulfonyl)diazomethane
138529-84-7 138529-91-6, 2-Cyclohexylcarbonyl-2-(p-toluenesulfonyl)propane 142940-36-1 158593-28-3
(chemical-amplified **photoresists** containing p-vinylpyridine polymer for high resolution patterning in semiconductor device manufacture)

L31 ANSWER 43 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:595644 HCAPLUS
DOCUMENT NUMBER: 123:127629
TITLE: Resist materials

INVENTOR(S): Takemura, Katsuya; Ishihara, Toshinobu; Maruyama, Kazumasa; Takeda, Yoshifumi; Shigemitsu, Minoru; Ito, Kenichi
PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: **Patent**
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

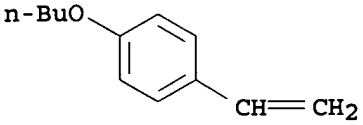
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07049569	A2	19950221	JP 1994-71337 <--	19940317
JP 3427133	B2	20030714		
EP 701171	A1	19960313	EP 1994-113965 <--	19940906
EP 701171	B1	19971217		
R: CH, DE, FR, LI, NL				
PRIORITY APPLN. INFO.:			JP 1993-154461 A <--	19930601

AB The title materials contain an onium salt R1nMX [R1 = (substituted) aromatic group; M = sulfonium, iodonium; X = p-toluenesulfonate, trifluoromethanesulfonate; n = 2, 3], an alkali-soluble resin, and, as a dissoln.-inhibitor, a polymer [CH(C6H4OH-p)CH2]m[CH(C6H4R2-p)CH2]x[CR3(CO2Bu-tert)CH2]y[CR3(CO2H)CHR4]z (I; R2 = H, C1-6 alkyl, C1-6 alkoxy; R3 = H, Me; R4 = H, CO2H, CO2Bu-tert; $0 \leq m \leq 0.9$; $0 < x \leq 0.9$; $0 < y \leq 0.9$; $0 \leq z \leq 0.5$; $m + x + y + z = 1$; weight average mol. weight of I is 500-10,000). The materials are useful as pos.-working resists showing high sensitivity toward high energy rays and giving high resolution patterns with good plasma etch resistance and thermal resistance. Thus, a resist comprised poly(hydroxystyrene) partially substituted with tert-butxycarbonyl group, p-butoxystyrene-tert-Bu acrylate copolymer, and triphenylsulfonium triflate.

IT **165456-29-1P**
(dissoln. inhibitor; **resist** material containing onium salt and alkali-soluble resin and dissoln. inhibitor)
RN 165456-29-1 HCAPLUS
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 1-butoxy-4-ethenylbenzene (9CI) (CA INDEX NAME)

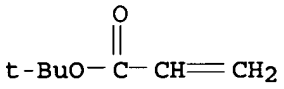
CM 1

CRN 105337-03-9
CMF C12 H16 O



CM 2

CRN 1663-39-4
CMF C7 H12 O2



IC ICM G03F007-039
ICS C08F020-06; C08F020-18; C08F212-14; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
IT **Resists**
(chemical **amplification**; **resist** material containing onium salt and alkali-soluble resin and dissoln. inhibitor)
IT **165456-29-1P** 165456-30-4P 165456-31-5P 165456-32-6P
(dissoln. inhibitor; **resist** material containing onium salt and alkali-soluble resin and dissoln. inhibitor)
IT 66003-78-9, Triphenylsulfonium triflate 84563-54-2, Bis(tert-butylphenyl)iodonium triflate
(**resist** material containing onium salt and alkali-soluble resin and dissoln. inhibitor)
IT 59269-51-1D, Poly(hydroxystyrene), tert-butoxycarbonylated
(**resist** material containing onium salt and alkali-soluble resin and dissoln. inhibitor)

L31 ANSWER 44 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:32944 HCAPLUS
DOCUMENT NUMBER: 114:32944
TITLE: Synthesis and photochemical reaction of polymers containing pendant 2-cyclohexenone-4-yl ester group
AUTHOR(S): Iizawa, Takashi; Nishiyama, Kazuaki; Nishikubo, Tadatomi
CORPORATE SOURCE: Fac. Eng., Hiroshima Univ., Higashihiroshima, 724, Japan
SOURCE: Journal of Photopolymer Science and Technology (1990), 3(2), 125-6
CODEN: JSTEEW; ISSN: 0914-9244
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The synthesis, acidolysis, and photolysis of poly (2-cyclohexenone-4-yl methacrylate) were studied in terms of deblocking of the protecting 2-cyclohexenone-4-yl ester group for use in chemical **amplification resists.** The polymer and its copolymers were prepared from radical polymerization of CH2:CMeCO2H and comonomers in DMSO at 60° for 2 h and then

at 80° for 1 h using 1 mol% AIBN, followed by esterification of the resulting polymer solution with 4-bromo-2-cyclohexenone using DBU as an acid acceptor. Photolysis of the polymer film in the presence of a photogenerating cationic catalyst did not effect the deblocking but merely resulted in the protonation of the carbonyl group of the cyclohexenone moiety. The acidolysis of 4-acetoxy-2-cyclohexenone in CF3SO3H quant. yielded phenol and AcOH.

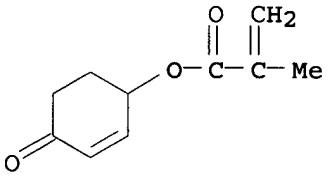
IT **131193-08-3P**
(preparation and acidolysis and photolysis of, for chemical-**amplification photoresists**)

RN 131193-08-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 4-oxo-2-cyclohexen-1-yl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 131193-07-2
CMF C10 H12 O3



CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35

IT Photolysis
(of poly(cyclohexenonyl methacrylate), for chemical-**amplification photoresist**)

IT Hydrolysis
(acid, of poly(cyclohexenonyl methacrylate), for chemical-**amplification photoresist**)

IT **Resists**
(photo-, chemical-**amplification**, characteristics of poly(cyclohexenonyl methacrylate) for)

IT **131193-08-3P**
(preparation and acidolysis and photolysis of, for chemical-**amplification photoresists**)

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=> d his

     FILE 'HCAPLUS' ENTERED AT 13:42:03 ON 27 APR 2006
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                 SEL RN

     FILE 'REGISTRY' ENTERED AT 13:42:24 ON 27 APR 2006
L2            17 S E1-E17

     FILE 'LREGISTRY' ENTERED AT 13:42:56 ON 27 APR 2006
L3               STR
L4               STR

     FILE 'REGISTRY' ENTERED AT 13:49:32 ON 27 APR 2006
L5               SCR 2043
L6               STR L4
L7               STR L4
L8            50 S L3 AND L7 AND L5
L9               SCR 2077
L10           50 S L3 AND L7 AND L5 NOT L9
L11              STR L7
L12           50 S L3 AND L11 AND L5
L13           50 S L3 AND L11 AND L5 NOT L9
L14              SCR 1918 OR 1995 OR 2026 OR 2021 OR 2016
L15           50 S L3 AND L11 AND L5 NOT (L9 OR L14)
L16           50 S L3 AND L11 AND L5 NOT L14
L17           50 S L3 AND L7 AND L5 NOT (L9 OR L14)
L18        65283 S L3 AND L11 AND L5 NOT (L9 OR L14) FUL
L19            5 S L18 AND L2
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L20       242746 S L18
L21        59331 S L20(L)PREP/RL
L22         4780 S L21(L)?RESIST?
L23         1429 S L22 AND PHOTOG?/SC
L24         1429 S L23 AND (RESIST? OR PHOTORESIST?)/IT
L25          108 S L24 AND AMPLIFIC?
L26           93 S L25 AND P/DT
L27           78 S L26 AND (1907-2002)/PRY,AY
L28           15 S L25 NOT L26
L29           11 S L28 NOT (2003-2006)/PY
L30           89 S L27 OR L29
L31           44 S L30 AND AMPLIFIC?(A)?RESIST?
L32            1 S L31 AND L1
L33            5 S L19
L34            3 S L33 NOT L31


=> d l34 1-3 ibib abs hitstr hitind

L34  ANSWER 1 OF 3  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        2004:193857  HCAPLUS
DOCUMENT NUMBER:         140:375562
TITLE:                   Radical copolymerization of
                         2-trifluoromethylacrylic monomers. II.
                         Kinetics, monomer reactivities, and
                         penultimate effect in their copolymerization
                         with norbornenes and vinyl ethers
AUTHOR(S):               Ito, Hiroshi; Okazaki, Masaki; Miller, Dolores
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C.
CORPORATE SOURCE: IBM Almaden Research Center, San Jose, CA, 95120-6099, USA
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2004), 42(6), 1478-1505
CODEN: JPACEC; ISSN: 0887-624X
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

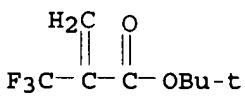
AB Radical copolymn. of electron-deficient 2-trifluoromethyl acrylic (TFMA) monomers, such as 2-trifluoromethyl acrylic acid and t-Bu 2-trifluoromethyl acrylate (TBTFMA), with electron-rich norbornene derivs. and vinyl ethers with 2,2'-azobisisobutyronitrile as the initiator were investigated in detail through the anal. of the kinetics in situ with 1H NMR and through the determination of the monomer reactivity ratios. The norbornene derivs. used in this study included bicyclo[2.2.1]hepta-2-ene (norbornene) and 5-(2-trifluoromethyl-1,1,1-trifluoro-2-hydroxyl-propyl)-2-norbornene. The vinyl ether monomers were Et vinyl ether, t-Bu vinyl ether, and 3,4-dihydro-2-H-pyran. Vinylene carbonate was found to copolymerize with TBTFMA. Although none of the monomers underwent radical homopolymn. under normal conditions, they copolymd. readily, producing a copolymer containing 60-70 mol % TFMA. The copolymn. of the TFMA monomer with norbornene and vinyl ethers deviated from the terminal model and could be described by the penultimate model. The copolymers of TFMA reported in this article were evaluated as chemical amplification resist polymers for the emerging field of 157-nm lithog.

IT **478623-13-1P 478623-14-2P 478623-15-3P 478623-16-4P**
(kinetics radical copolymn. of trifluoromethyl acrylic monomers with norbornene and vinyl ethers)

RN 478623-13-1 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2-(ethenyloxy)-2-methylpropane (9CI) (CA INDEX NAME)

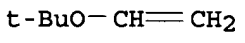
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

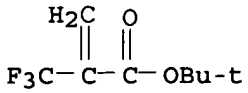
CRN 926-02-3
CMF C6 H12 O



RN 478623-14-2 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with ethoxyethene (9CI) (CA INDEX NAME)

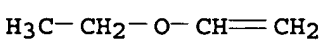
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

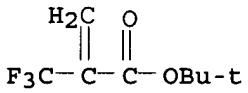
CRN 109-92-2
CMF C4 H8 O



RN 478623-15-3 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,3-dihydrofuran (9CI) (CA INDEX NAME)

CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



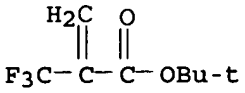
CM 2

CRN 1191-99-7
CMF C4 H6 O

RN 478623-16-4 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1,3-dioxol-2-one (9CI) (CA INDEX NAME)

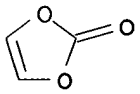
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

CRN 872-36-6
CMF C3 H2 O3



CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 74
IT 370866-19-6P, Norbornene-2-Trifluoromethylacrylic acid copolymer
370866-39-0P 478548-62-8P **478623-13-1P**
478623-14-2P 478623-15-3P 478623-16-4P
634196-78-4P 684648-12-2P
(kinetics radical copolymn. of trifluoromethyl acrylic monomers with norbornene and vinyl ethers)
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:799360 HCAPLUS
DOCUMENT NUMBER: 139:44101
TITLE: Aliphatic platforms for the design of 157-nm chemically amplified resists
AUTHOR(S): Ito, Hiroshi; Truong, Hoa D.; Okazaki, Masaki; Miller, Dolores C.; Fender, Nicolette; Breyta, Gregory; Brock, Phillip J.; Wallraff, Gregory M.; Larson, Carl E.; Allen, Robert D.
CORPORATE SOURCE: IBM Almaden Research Ctr., San Jose, CA, USA
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2002), 4690(Pt. 1, Advances in Resist Technology and Processing XIX), 18-28
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Our primary platform for 157 nm pos. resists is built on a copolymer of t-Bu 2-trifluoromethylacrylate (TBTFMA) and norbornene bearing hexafluoroisopropanol (NBHFA) as an acid group, which is prepared by radical copolymn. The radical copolymn. of 2-trifluoromethylacrylic monomers with norbornene derivs. has been found through reactivity ratio determination and in situ 1H NMR anal. of kinetics to deviate from the terminal model but to follow the penultimate model. These copolymers typically contain °50 mol% TBTFMA, are lipophilic, and fail to provide good imaging due to poor wettability. Blending a homopolymer of NBHFA (optical d. (OD)=1.7/μm at 157 nm) into the copolymers (OD=2.5-2.7/μm)

increases the hydrophilicity and reduces OD to 2.2-2.0/μm , providing high resolution images. Another platform we have identified is a copolymer of TBTFMA with vinyl ethers, which can be prepared by using a common radical initiator. Some of the vinyl ether copolymers are also homogeneously miscible with the NBHFA homopolymer and thus their OD and aqueous base development can be improved by blending.

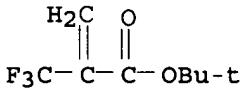
IT **478623-13-1P 478623-14-2P 478623-15-3P 478623-16-4P**
(aliphatic platforms for design of 157-nm chemical amplified resists containing)

RN 478623-13-1 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2-(ethenyloxy)-2-methylpropane (9CI) (CA INDEX NAME)

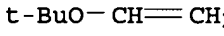
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

CRN 926-02-3
CMF C6 H12 O

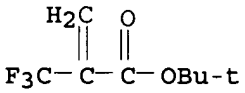


RN 478623-14-2 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with ethoxyethene (9CI) (CA INDEX NAME)

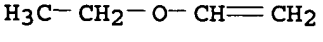
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

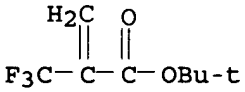
CRN 109-92-2
CMF C4 H8 O



RN 478623-15-3 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,3-dihydrofuran (9CI) (CA INDEX NAME)

CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



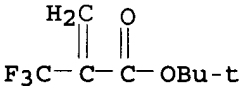
CM 2

CRN 1191-99-7
CMF C4 H6 O

RN 478623-16-4 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1,3-dioxol-2-one (9CI) (CA INDEX NAME)

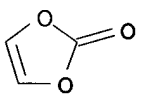
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

CRN 872-36-6
CMF C3 H2 O3



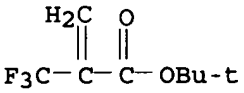
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38
IT 357397-07-0P 370866-39-0P 478548-62-8P 478623-10-8P
478623-13-1P 478623-14-2P 478623-15-3P

478623-16-4P
(aliphatic platforms for design of 157-nm chemical amplified resists containing)
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:633328 HCAPLUS
DOCUMENT NUMBER: 138:47153
TITLE: Fluoropolymers for 157/193 nm lithography: chemistry, new platform, formulation strategy, and lithographic evaluation
AUTHOR(S): Ito, H.; Truong, H. D.; Okazaki, M.; Miller, D. C.; Fender, N.; Brock, P. J.; Wallraff, G. M.; Larson, C. E.; Allen, R. D.
CORPORATE SOURCE: IBM Almaden Research Center, San Jose, CA, 95120, USA
SOURCE: Journal of Photopolymer Science and Technology (2002), 15(4), 591-602
CODEN: JSTEEW; ISSN: 0914-9244
PUBLISHER: Technical Association of Photopolymers, Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A copolymer of tert-Bu 2-trifluoromethylacrylate (TBTFMA) and norbornene bearing hexafluoroisopropanol (NBHFA) as an acid group, which is prepared by radical copolymn., is employed in the authors 157 nm resist. The radical copolymn. of 2-trifluoromethylacrylic monomers with norbornene derivs. has been shown to follow the penultimate model much better than the commonly employed terminal model. These copolymers (containing >50 mol% TBTFMA) are too lipophilic to provide good imaging. Blending a NBHFA homopolymer with an optical d. (OD) of 1.7/μm at 157 nm into the copolymers (OD = 2.5-2.7/μm) results in increased hydrophilicity and reduced OD (2.2-2.0/μm) and provides high resolution images. A copolymer of TBTFMA with vinyl ethers has been identified as a new platform, which can be prepared facilely by common radical polymerization Certain vinyl ether copolymers are also compatible with the NBHFA homopolymer and thus blending improves their OD and aqueous base development. Because these fluoropolymers are highly transparent at 193 nm as well, they are evaluated as 157/193 dual wavelength resists.
IT **478623-13-1 478623-14-2 478623-15-3**
478623-16-4
(design and lithog. evaluation of photoresist formulations for 157/193 nm lithog. containing copolymers of trifluoromethylacrylic monomers with vinyl ethers)
RN 478623-13-1 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2-(ethenyloxy)-2-methylpropane (9CI) (CA INDEX NAME)

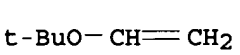
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

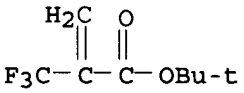
CRN 926-02-3
CMF C6 H12 O



RN 478623-14-2 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with ethoxyethene (9CI) (CA INDEX NAME)

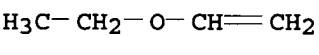
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

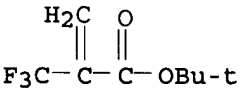
CRN 109-92-2
CMF C4 H8 O



RN 478623-15-3 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,3-dihydrofuran (9CI) (CA INDEX NAME)

CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

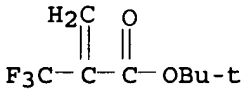
CRN 1191-99-7

CMF C4 H6 O

RN 478623-16-4 HCAPLUS
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1,3-dioxol-2-one (9CI) (CA INDEX NAME)

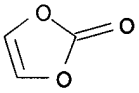
CM 1

CRN 105935-24-8
CMF C8 H11 F3 O2



CM 2

CRN 872-36-6
CMF C3 H2 O3



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35
IT 478623-12-0 **478623-13-1 478623-14-2 478623-15-3 478623-16-4**
(design and lithog. evaluation of photoresist formulations for 157/193 nm lithog. containing copolymers of trifluoromethylacrylic monomers with vinyl ethers)
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT